

# CENTRAL EUROPE AUTOMOTIVE REPORT™

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## Regional Market Highlights

### Poland

#### Federal Mogul Buys Polish Bearings Maker

**Federal-Mogul Corporation** announced on March 11 that it has purchased approximately 95% of the common stock of Polish automotive supplier **Bimet S.A.** Bimet, located in Gdansk, Poland, manufactures engine bearings, bushings, and related products. The terms of the sale were not disclosed.

"We are driven to be a competitive player in the global powertrain products market and the addition of the Gdansk team provides us with a low cost, high quality production environment," said Alan Johnson, executive vice president, Powertrain Systems.

Bimet was privatized in 1994 and has about 600 employees. In 1997, the company's sales hit about \$12 million.

#### Sobieslaw Zasada Centrum Increasing Liquidity of Shares

Edward Nowak, the new president of Polish vehicle manufacturer **Sobieslaw Zasada Centrum (SZC)** and former deputy minister of the economy, said at a press conference on March 24 that the company intends to increase the liquidity of its shares on the **Warsaw Stock Exchange** by introducing a greater number of shares held by SZC onto the market.

In this way, SZC would be transformed from a family business into a genuine public company. Nowak said his most pressing task is to prepare, by the end of April, a plan for the SZC group's strategic development, which should first and foremost involve reducing operating costs.

Nowak announced that some surplus assets would be sold. Some subsidiaries, like **Zaklady Samochodowe Jelcz SA** in Jelcz (Wroclaw province) will be able to go onto the stock exchange. "The group's initial spontaneous development should be replaced by ordered development," Nowak emphasized. "What is needed now is a total change of our company's image."

#### No Details On SZC/Hyundai Assembly Agreement

The details of SZC's agreement with the Polish government regarding the construction of a factory for **Hyundai** Atos cars in Starachowice have yet to be made

Continued on Page 2

## Profile

### Glassmaker Pilkington Automotive Goes Solo in Poland

*Pilkington Automotive Poland is taking on the automotive glass market in Poland. The company, owned by Pilkington Plc, is Poland's largest producer of automotive windscreens.*



Ryszard Jania

*Pilkington started operations in Poland in 1993 through a joint venture with a state-owned glass factory in Sandomierz in south-east Poland. The joint venture — Pilkington Sandoglass — produced automotive glass and a wide range of glass for the construction industry.*

*As of April 1, 1998, Pilkington Automotive Poland purchased the automotive glass business from Pilkington Sandoglass and the two companies now operate as totally separate entities.*

*Pilkington is currently investing £20 million (\$33.5 million) into the construction of a new plant in Poland for production of windscreens and window sets. The new plant will be located in Sandomierz. Pilkington currently employs 155 workers in Poland, and this figure is*

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### Highlights Continued from Page 1

public. The Koreans are to propose the cooperation guidelines by May 28, which will be the basis for defining and signing appendices to the preliminary agreement with the **Ministry of the Economy**. This will be decisive for whether SZC receives a concession for duty-free assembly of some Hyundai models.

#### Daewoo Says GM Deal Won't Change Polish Investment Plans

After **Daewoo Group** Chairman Kim Woo-Choong announced on March 26 that **General Motors Corp.** might purchase up to 50% of the shares of **Daewoo Motor**, Daewoo representatives in Warsaw stated yet again that this would not result in any changes in Daewoo's plans or investment volume in Poland.

According to Daewoo, although the agreement might give GM some management power, ultimate managerial power will be left with Daewoo. A deal is expected to be completed by September.

#### Car Loans Complicated by New Bank Collateral Register

The less dynamic new car sales trend in Poland may be partly attributed to the new national bank collateral register. The new register, introduced on January 1, 1998, makes the procedure for obtaining loans for car purchases more complicated. The mandatory register entry costs PZL 200 (\$55) and only a few banks have decided to cover this cost themselves, with the majority preferring to have the customers pay the fee.

#### C.F. Gomma Purchases Weatherhead Brake Hose Division

The Italian company **C.F. Gomma Sp.A.**, a manufacturer of air springs, brake hoses, and anti-vibration components, has purchased **Weatherhead Brake Hose Division**, formerly a division of the Dana Corporation.

The purchase will give C.F. Gomma a market share in the brake hose sector of nearly 18% in 1998, the largest share worldwide, followed by **Delphi** and **Toyoda Gosei**, who each have a 12% share globally. C.F. Gomma's sales are expected to top \$270 million this year,

with its largest customer base in Central and South America.

C. F. Gomma operates with factories in Italy, Poland, Turkey, China, India, Brazil and Argentina.

#### New Car Sales Off In Poland

New car sales in Poland dropped almost a percentage point during the first two months of 1998, according to figures released by **SAMAR, s.c.**. Sales totaled 84,447 units at the end of February. Although local production was up 26% to 62,258 units, imports were off over 38%. Sales of new commercial vehicles also dropped, slipping over 8%. CV sales were hurt by an almost 13% drop in domestic production.

### Czech Republic

#### Skoda Profitable in '97

**Skoda Auto** recorded an after-tax profit of CZK 1.168 billion (\$338 million) in 1997, the company announced at its annual press conference in Mlada Boleslav on March 19, 1998. Skoda's turnover totaled CZK 90.095 billion (\$2.61 billion), an increase of 53% over 1996's figure. Skoda, the largest company in the Czech economy, is the country's largest exporter, accounting for 8% of total Czech exports.

In 1997, Skoda increased its worldwide sales by 28.8% to 336,334 cars. The company's new Octavia model accounted for almost 48,000 units, while the remaining sales were of Skoda's bread and butter Felicia models. Production at Skoda's three plants in the Czech Republic increased over 35% last year to a record 357,170 units.

At the press conference, Skoda reconfirmed its commitment to raise annual production to 500,000 vehicles by the turn of the century.

### Hungary

#### Hungary Possible Site For Ford Investment

**More Market Highlights on Page 4**



# EDITORIAL CALENDAR

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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
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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

**Quality Corner** - information on improving supplier quality in the region

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## Highlights Continued from Page 2

Hungary is one of several countries, including the Czech Republic, that is being considered by **Ford Motor Co.** as a possible site for engine production, gearbox production, and car assembly. Ford currently produces ignition coils, fuel pumps, starters, and air-fuel charging assemblies at its Alba plant in Szekesfehervar, Hungary.

### Shinwa Makes Greenfield Investment In Hungary

The Japanese supplier **Shinwa Co., Ltd.** plans to build an audio components factory in Hungary. The company will invest about \$23 million in a factory to produce plastic parts and mechanisms for car CD and cassette players.

The location chosen by Shinwa is Miskolc, a town in the northeast of Hungary with high unemployment. In the first phase of the investment, about \$12 million will be plowed into the facility which will employ 300 people. At full scale production, scheduled for February 1999, the company expects to employ about 600 workers.

### Alcoa Attains Quality Certifications

**Alcoa Wheel Products Europe** has earned certification to European ISO 9002, American QS 9000, and German VDA 6.1. These certifications cover Alcoa's forged aluminum wheel plant in Szekesfehervar, Hungary, as well as the sales and marketing operations in Frankfurt, Germany and Paal, Belgium.

## Slovakia

### VW Bratislava To Start Producing New VW Vento

**Volkswagen Bratislava** will start production of the new generation Volkswagen Vento, a four-door modification of the VW Golf A4. The Ventos produced in Slovakia will be custom-made, all wheel drive Syncro models, a specialty of the Bratislava plant.

A new assembly line — ML 2 — is currently being prepared for the production launch. This will be the second assembly line at the VW Bratislava plant, and estimated daily production will reach 200 units. The VW Golfs produced on the line will have

their bodies varnished in Germany. A start date has not yet been set, but sources within Volkswagen said production may begin by the end of this year.

VW Bratislava currently ranks in the first third of the Volkswagen company quality rankings. According to top VW Bratislava managers, one of the important advantages enjoyed by the company is high flexibility. Such flexibility was displayed in June 1997 when the factory started emergency production of the VW Passat B5 to alleviate capacity pressures on VW's plants in Germany. Up to December 1997, 50 VW Passats were produced each day in Bratislava.

This past February, Volkswagen Bratislava produced 5,849 cars, a 51% increase compared to January when 3,866 units were made.

In 1998, VW Bratislava plans to produce 120,000 cars, three times more than production last year, and expects its employee ranks to swell to 4,500 people.

### Volkswagen May Open New Components Plant in Slovakia

**Volkswagen** is considering opening a components plant in central Slovakia, **Volkswagen Bratislava** general director Jozef Uhrík told the business daily **Narodna Obroda** in early April. According to Mr. Uhrík, the decision would be made within several months.

This would be VW's second Slovak-based components plant. **Volkswagen Elektrické Systémy** currently produces car cable systems in Slovakia.

### Slovak Consumers & Suppliers Contribute to Skoda's Record Year

Slovakia is **Skoda Auto's** second most important export market, with some 29,000 Skoda cars snapped up by Slovak buyers last year. Slovakia ranks just behind Germany where Skoda sales jumped 40% last year to 30,000 units.

On the supply side, last year Skoda purchased parts and components valued at CZK 3.3 billion (\$97 million) from 19 Slovak suppliers. Czech suppliers took the lion's share of the business with sales totaling CZK 37.5 billion (\$1.1 billion) and foreign suppliers racked up sales of CZK 14 billion (\$411 million). "Our

intention is to maintain this favorable ratio," said Skoda board chairman Vratislav Kulhanek at the company's annual press conference on March 19, 1998.

### PMT Signs Joint Venture In Slovakia

On April 3, 1998, U.S.-based **Plastic Molding Technology Inc.** (PMT) signed a joint venture agreement with the Slovak tool and mold manufacturer **Esox**. Both companies will contribute approximately \$500,000 to the new venture, which will operate under the name **Esoplast**. Based in north-western Slovakia, Esoplast will specialize in insert and injection molding for the auto and other industries.

### Slovak Bus Maker Supplying Former Soviet Union

The Slovak bus producer **Novop, a.s., Lucenec** has preliminary orders for 65 buses in 1998. The Slovak market will absorb 5 units, with the rest reserved for customers in the countries of the former Soviet Union.

At present, the tests to homologize the city and inter-city version are conducted by the **Slovdekra** company. Some modifications must be made on the buses, such as brake changes and noise level reduction on the inter-city bus. The tests should be finished by the end of March for the city version and end of April for the inter-city version.

The city version, with a capacity for 96 passengers, sports a proposed price tag of SK 2.6 million (\$74,000). The inter-city version will cost SK 2.65 million (\$75,700) and a tourist version sells for 4.4 million (\$125,700). The price of the latter is increased due to the use of a **DAF** chassis.

Using one shift production, the company produces about 300 buses per year.

### New Car Sales In Slovakia Up

February new car sales in Slovakia numbered 4,851 units, an increase of 53% from January's figures and up 13% compared to sales in February 1997. Light commercial vehicles sales totaled 371 units in February, down 3.5% compared to sales in January.

In the category of cars and LCVs, **Skoda**

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# Electronics Sector Sees Big Investment

## Automotive Electronics Review

The automotive electronics sector in Central Europe hasn't missed out on the foreign investment boom. The list of companies investing in this sector is virtually a who's who of auto electronic producers.

The manufacturers are spread throughout the region, with an especially high concentration in the Czech Republic and Hungary. Even some of the national companies in Central Europe are manufacturing products with high enough quality to supply Western manufacturers.

### Wiring Harness Production Blankets Central Europe

Companies have found Central Europe to be ideal for producing wire harnesses. The region's low labor costs, of course, make it an attractive locale for such a labor intensive production process.

"Wiring harness production has a very high labor content," said Leszek Waliszewski, **Delphi Poland's** country director. "It has one of the highest labor contents in the automotive industry." Delphi produces wiring systems in Poland, the Czech Republic, Hungary, and Romania.

Companies have wasted little time moving wiring harness production to Central Europe. In Hungary, for instance, **UT Automotive** announced this year that it is opening a new 12,000 sq. meter wiring harness assembly plant. UT Automotive started producing wire harnesses in Hungary in 1991 and currently has more than 2,000 employees in the country. With the new plant capacity, exports of \$160-\$170 million are expected by the year 2000.

Slovakia, a country that has seen very modest automotive sector investment, has several wiring harness manufacturers. **Volkswagen Elektrické Systémy** — based in Nitra — supplies car cabling systems to VW group plants and to other car manufacturers. And **Yazaki Debnar Slovakia**, a joint venture between the Japanese company **Yazaki Corp.** and the **Slovak &**

**Electronic Corp.**, last year completed construction of a new 13,000 sq. meter wiring harness facility in Slovakia. By 1999, the company expects yearly production of wire harnesses to hit 133,333 units and plans to employ 1,400 workers. Yazaki had even bigger plans for Slovakia — the company originally envisioned a 5,000 to 6,000 worker factory but scaled these plans back due to local labor market conditions.

In Poland, numerous Polish/Korean joint venture companies that are a part of the **Daewoo Automotive Components Group** produce wiring harnesses, including **Sungsan ZEM Elk, DPI ZCS Ciechanow, JC-ZSM Warszawa, and Daedong ZSM Warszawa.**

Since the investment required for a wiring harness production facility is low, the risk of establishing a plant in a new market is minimized. "Wiring harness production is quite flexible for moving into unknown, new markets," said Delphi's Waliszewski.

### Below is a quick look at some of the electrical product producers and distributors in Central Europe

#### Poland

- **Delphi Harrison Thermal Systems** — heat exchanger plant employs 900 workers
- **Delphi Packard Electric** — wiring harnesses plant employs over 1,100 workers
- **UT Automotive** — building a wiring systems plant in the Polish city of Mielec. By the year 2000, the company expects the new plant to generate sales of more than \$100 million and employ 500 workers
- **Magneti Marelli Poland** — Currently produces instrument clusters, thermal systems, and dashboard panels using 1,200 workers. Studying the possibility of producing starters and alternators in Poland
- **MERA Blonie** — instrument panel production
- **Zelmont Warsaw** -- produces ignition coils, headlights
- **Iskra Kielce** -- makes ignition plugs

- **Quinton Hazell Polska** — distributes electrical products through its system of distribution companies

#### Czech Republic

- **Autopal (Ford)** — produces lighting systems for export to Ford plants in Germany and Spain
- **VDO Instruments** — produces instrument panels, fuel management systems, and windshield washer systems at two plants in the Czech Republic
- **Robert Bosch** — makes components for antilock brakes, traction control, and fuel injection systems in three plants. Making a CZK 600 million (\$18 million) investment in a new car lighting plant
- **Automotive Safety Components International** — opened an air bag manufacturing plant in Jevicko
- **Motorpal** — producer of diesel fuel injection systems, exports to 85 countries and maintains R&D department of 100 people
- **TRW** — manufactures electrical switches for export
- **Siemens** — ignition harnesses, electronic ignitions, and immobilizers
- **Delphi Packard Electric** — makes wiring systems
- **Valeo** — produces air-conditioning and heating systems
- **Hella** — makes lighting systems at a greenfield facility
- **ITT Automotive** — produces electrical wipers, motors, and switches
- **Magnetron** — makes alternators, starters, distributors, ignition coils, wiring systems

#### Hungary

- **Ford** — Alba plant in Szekesfehervar manufactures ignition coils, fuel pumps, starters,

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# Self-made Man Becomes Distribution King in Romania

## Paneuro Group Bringing Order to Aftermarket

In 1991, 26 year-old Zoltan Prosszer decided, as did hundreds of thousands of other tiny Romanian entrepreneurs, that he should strike out on his own. He opened a small car service and repair shop — **Paneuro Company** — in Targu Mures, his hometown in the heart of Transylvania, some 350 kilometers north of Bucharest.

“We had some problems with spare parts, so we also established a small specialized store, selling exclusively locally-produced items,” recalls Prosszer. “Later on we started to sell imported spare parts as well.” It was the beginning of what quickly became the countrywide Paneuro group distribution network.

Times were tough for the new company during the first few years, but in 1993 business took off — sales skyrocketed to DM1.4 million (\$780,000) from DM 100,000 (\$55,000) in 1992. In 1993, the company managed to win exclusive distribution rights from two important suppliers, **Sachs** and **Hella**.

### Trading Company Established to Stabilize Supply

The development of the Paneuro group makes for a classical case study on vertical integration, with the each unit of the group in charge of a specific link of the chain. As Paneuro Company rode the wave of a booming local market of imported second hand cars, it soon became obvious that erratic supply problems had to be overcome.

Therefore, in March 1994 a second company, **Paneuro Trading**, was created. Paneuro Company remained focused on the retail side of the business, selling to end users and small repair and maintenance outlets.

Paneuro Trading took over wholesale operations, supplying the group's own retail network and independent retailers, as well as large service operations, gas stations, insurance companies, and major corporate customers. In 1994, the group also built its first large, state-of-the-art wholesale warehouse in Targu Mures.

### International Company Handles Import/Export & Diversifies

The same strategy of vertical integration led to the establishment at the end of 1994 of the third group company — **Paneuro International**.

“[Paneuro International] performs all the import-export operations of the group and is the interface with our overseas suppliers,” said Mr. Prosszer. The company also became involved in another strategic move of the group — diversification.

Paneuro International chose a very cautious approach, diversifying into businesses closely related to its core competence: import and sale of devices and equipment for car repair shops; providing international transport services for third parties; and building a distribution network for **Citroen** vehicles.

The careful diversification seems to have paid off. Paneuro International's turnover jumped through the roof in 1996 to DM 7.3 million (\$4 million), compared to DM 150,000 (\$83,000) the previous year. Last year, sales doubled again.

### Logistics Provide the Competitive Advantage

As is always the case in any distribution-oriented business, logistics is the key and Paneuro is well organized in this realm.

“Besides our first warehouse in Targu Mures, we built another one in Bucharest,” said Prosszer. “These two hold permanent stocks, sized according to the market demand. Then we have three other transit warehouses, in Iasi, Timisoara, and Alesd, properly positioned to ensure full coverage of the country and fed by the central Targu Mures warehouse.”

Paneuro International operates a fleet of long haul, heavy lorries and one of the main advantages of Paneuro Trading over competition is the fleet of trucks. “Any order is filled in a maximum of 24

hours — and we are fully committed to our over 200 distributors to further improve that,” said Prosszer.

### Young Team Keeps Company on Top

The Paneuro group employs 148 people, out of which 32 are women, 49 are university graduates, and the average age is an amazingly low 31.7 years. In 1997, the team helped turnover rise to DM 39 million (\$21.5 million), which ranked the group at the helm of spare parts and components importers.

A modest man, Mr. Prosszer is not very talkative when it comes to benchmarking his company against competitors.

“We are leaders in most segments of the local market for spare parts and components for imported cars — with several exceptions, like tires, mineral oils, and accumulators,” he said. “I would only say that we outperform competition. For instance, we have in excess of 50 OEM suppliers, most of them well-known brands, while our competitors work with 8 or 9.”

Among the established brands that make up the bulk of Paneuro's business are **Sachs, Hella, Elring, Federal Mogul, Gates, Tecnicar, and Textar**.

### Diversification Will Continue

According to the company's strategic plan, it will continue to diversify, focusing on providing value added services and complete solutions to customers, rather than just selling products. Each outlet in the company's own retail network, as well as the independent retailers, will take advantage of an authorized service shop that will guarantee both the spare part and the repair works.

Paneuro has already put into place an incentive system that provides discounts to the distributors who achieve good turnovers. Building market share in the market for tools, devices, and equipment for service centers is the company's second priority, followed by the development of the new vehicles sales network.

Last but not least, Paneuro is setting up a comprehensive MIS system that will improve the distribution business to a just-in-time operation.

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## Best Selling Models in Poland (YTD February 1998)

Passenger Cars			Light Commercial Vehicles			Medium Commercial Vehicles		
Make	Units	% Change '98 v '97	Make	Units	% Change '98 v '97	Make	Units	% Change '98 v '97
Daewoo Tico	7,066	44.80	FSO Polonez Truck	1,687	-21.57	Daewoo Lublin	1,666	0.79
Fiat Cinquecento	7,020	-30.71	Skoda Pick up	448	289.57	Mercedes Vito	479	101.26
Fiat Siena	6,602	-	Citroen C15	421	-34.22	FSC - Zuk	391	-41.11
PF 126	6,576	-27.20	Fiat Uno Van	298	11.19	VW Transporter	291	94.00
Daewoo Lanos	6,270	-	Citroen Berlingo	158	-	Ford Transit	249	-24.55
Opel Astra	4,036	43.43	GM - Opel Combo	111	-39.34	Iveco Daily	231	110.00
Daewoo Nexia	3,774	23.45	Peugeot Partner	94	-41.25	Peugeot Boxer	148	208.33
Skoda Felicia	3,109	1.57	Fiat Cinquecento Van	51	-93.05	Fiat Ducato	103	-46.63
Fiat Uno	3,097	-30.03	VW Caddy	43	-57.14	Kia Ceres	103	106.00
Fiat Punto	2,959	3.97	Ford Courier Van	33	-28.26	Mercedes Sprinter	94	34.29

Source: SAMAR, s.c.

## Sales of New Cars and Commercial Vehicles in Poland

	Sales (Units)						YTD February	
	1992	1993	1994	1995	1996	1997	1998	% Change vs '97
<b>Passenger Cars</b>								
Local Production	144,748	170,549	199,724	206,284	260,265	337,467	62,258	26.19%
Import	54,531	71,059	50,558	58,754	114,347	140,493	22,189	-38.22%
<b>Total</b>	<b>199,279</b>	<b>241,608</b>	<b>250,282</b>	<b>265,038</b>	<b>374,612</b>	<b>477,960</b>	<b>84,447</b>	<b>-0.94%</b>
<b>Commercial Vehicles</b>								
Local Production	19,665	18,475	21,413	28,076	43,207	43,086	6,275	-12.91%
Import	3,250	5,497	2,542	3,870	7,586	12,217	1,347	21.90%
<b>Total</b>	<b>22,915</b>	<b>23,972</b>	<b>23,955</b>	<b>31,946</b>	<b>50,793</b>	<b>55,303</b>	<b>7,622</b>	<b>-8.28%</b>

Source: SAMAR, s.c

# Tips For Success In Central Europe

The Persistent Will Reap the Rewards



**Jeff Jones**

Making things happen in Central Europe always requires a few extra doses of effort. We recently tried to get a new phone line for our Slovak office. What we thought would be an easy task turned into a three month ordeal — a supreme test of our patience and resourcefulness.

During our protracted battle for telecommunications superiority, we heard many things, including “it’s not possible”, “the man you need to speak to is on vacation”, and “there’s a year long waiting list”. Undeterred, we pushed on, using all resources we could muster. And in the end, we got a brand new digital line. Lesson? Don’t give up. Persistence pays off.

Whether you are trying to get a new phone line, seal a deal with a new partner, set up a distribution network, or build a factory, the same rules apply. Nothing will happen as quickly as you want. And often it will appear that your goal is impossible. But success is possible. Magyar Suzuki knows this — it took them 5 years before they turned a profit at their factory in Hungary.

A variety of forces are at work to make business more challenging in Central Europe — mind numbing bureaucracy, multiple cultures (for more on culture clashes, see the CEAR Central Europe Automotive Forum™ at <http://www.pear/autoforum>), and different mindsets produced by decades of centralized planning. But despite these barriers, opportunities abound for those who are resourceful and patient.

Plastic Molding Technology Inc., a small automotive supplier based in the US, has been slowly building up business in Central Europe since 1991. Just this year they created a joint venture with a Slovak partner that will specialize in insert and injection molding for the auto industry. PMT has been working hard for seven years to make things happen in the region and now they’re well positioned to reap the benefits of their patience and effort.

Many companies in Central Europe have found that the local supply base is developing much slower than expected. Nonetheless, the companies that have treated this as a challenge instead of a deal breaker, and that have invested time and effort into working with local suppliers, are starting to see results. The same goes for those companies that have spent large amounts of time and money on training their workers.

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Don’t give up. Keep pushing. Rewards will come to those who persist.

Visit the [CEAR Central Europe Automotive Forum™](http://www.pear.com/autoforum) at <http://www.pear.com/autoforum> or click here [CEAR.COM™](http://www.pear.com)

## Fastest Sales Climbers in Poland (YTD February 1998)

Passenger Cars			Light Commercial Vehicles			Medium Commercial Vehicles		
Make	Units	Change '98 v. '97	Make	Units	Change '98 v. '97	Make	Units	Change '98 v. '97
		Units			Units			Units
Fiat Siena	6,602	6602	Skoda Pick-up	448	333	Mercedes Vito	479	241
Daewoo Lanos	6,270	6270	Citroen Berlingo	158	158	VW Transporter	291	141
Daewoo Nubira	2,215	2215	Fiat Uno Van	298	30	Iveco Daily	231	121
Daewoo Tico	7,066	2186	Peugeot 106XA	4	4	Peugeot Boxer	148	100
Toyota Corolla	1,663	1405	Renault Kangoo Exp.	4	4	Kia Ceres	103	53
Opel Astra	4,036	1222	Seat Inca	23	4	Kia Prego	42	42
Citroen Xsara	1,053	1053	Piaggio Porter	6	3	Citroen Jumper	62	30
Fiat Palio Wknd	939	939				Hyundai H100 P/V	61	28
Daewoo Nexia	3,774	717				Mercedes Sprinter	94	24
Skoda Octavia	689	689				Daewoo Lublin	1,666	13

Source: SAMAR, s.c.

# ERP Software Simplifies Complex Management Tasks

*Unique Challenges Posed by Central European Users*

Most Western automotive companies are well aware of the benefits of using enterprise resource planning (ERP) software to organize and manage their complex business systems. Companies such as **QAD**, **Baan**, and **SAP** produce ERP software suitable for automotive enterprises. Implementing such software in a Central European subsidiary, however, presents unique challenges.

And the challenges are even greater for local companies who have no experience with the software. For them, the software is a new, somewhat threatening, and often misunderstood technology.

## **Benefits Are Many; Capturing Costs Critical For Local Companies**

For automotive companies, the benefits of implementing ERP software can be far ranging — from inventory reduction, to improved customer response times, to better cost control. The software brings a company's financial, manufacturing, and distribution functions into balance, integrating them and enabling better planning and forecasting.

"Inventory reductions of 30%-50% are not unknown," said John Stepan of **QAD**, an ERP software provider.

"Customer response times can move from an environment where you deliver once every two weeks to where you are required to deliver to a regular daily shipment schedule."

The cost control features offered by ERP software are especially important for local companies in Central Europe.

"One of the key problems many Polish firms have at the moment is understanding their cost structures in enough detail to, for example, assess the profitability of a particular product or line item," said Neil Strange, director of **Arthur Andersen's** Business Consulting Group in Warsaw. "An advantage of having software is that it is a disciplined

way of capturing these costs for later analysis."

Even Western suppliers fall prey to costing inefficiencies. After agreeing with auto manufacturers on a price, they often find they can't earn a profit on a part due to the inability to properly cost engineering changes required by the OEM.

With automotive technology advancing at such a rapid pace, and since more and more development tasks are being dumped onto suppliers, the incidence of such errors is likely to increase. The detailed and structured cost breakdowns offered by ERP software can help solve this problem.

## **Implementation Challenges in Central Europe**

Implementing ERP software in Central Europe can be difficult. Cost control and profit were of little concern to companies under Communism. ERP is a new concept for most local companies and managers and staff have no experience using the sophisticated technology. Furthermore, those companies that have heard of the software may be turned off by rumors that implementation can take 2-3 years.

"Local companies often don't realize the changes that are required within their internal organizations," said QAD's Stepan. "These companies frequently need to implement far reaching changes to their internal processes to bring them in-line with global automotive requirements which will clearly become increasingly stringent as we move into the 21st Century."

## **Ford/Autopal Takes the Plunge**

**Autopal**, a components manufacturing operation in the Czech Republic owned by **Ford**, has used QAD's ERP software, MFG-PRO, for three years. The company, with over 3,000 employees,

produces lighting systems, air conditioner hoses, stamping dies, injection molds, and production machinery.

It took Autopal about 1 year to implement the software, which is now used at four Ford locations in the Czech Republic and at Ford's consolidation center in Cologne, Germany.

The software provides management with a better overall view of company operations. "Top management has daily, exact information about, for example, whether production is on or behind schedule," said Jan Hodek, Autopal's logistics supervisor.

Autopal has seen measurable improvements in its operations. "Before implementation, we held inventory for 20 days," said Hodek. "We've now decreased that inventory time to 3-9 days." And Autopal's work in process, which took 1 1/2 months before implementation, has been reduced to 2 to 10 days.

Mr. Hodek admitted that there were problems implementing the software. "People didn't understand the system and [why it was needed]," he said. "We had difficulties with data — people are not used to using exact numbers. Now [with the software], everything must be exact."

He noted that the company also had to educate staff about what to do with all of the reports generated by the software. Staff also had to be familiarized with the use of bar codes and scanners. "This was quite new for many people," he said. "Now people are oriented." Today, however, Autopal's staff is quite comfortable using the system. Perhaps even too comfortable. "We have too many users," said Hodek. "Everybody wants to know something." The heavy use puts some strain on the systems and slows down processing speed. To combat this, the company has learned to print out non-time sensitive reports at night.

Overall, however, the problems have been few. "We've had a very good experience," said Hodek ■

# Automotive Consulting Services

## Regional Special Report

“Where do I locate my plant in Poland?”, “How do I hire and retain the right people in Hungary?”, “How do we restructure our operations to be more competitive?”, “How can we optimize our company structure for Romanian tax purposes?”

These are all difficult questions, but answering them is essential. Essential for companies entering the Central European market, as well as for those companies who are already established in the region.

The demands placed on companies operating in the global auto industry are high. Vehicle buyers are squeezing the manufacturers who, in turn, are squeezing their suppliers. Conducting your operations efficiently and at peak performance is no longer a wishful goal. It's mandatory.

Companies may seek outside help when trying to solve the avalanche of problems and challenges they face in Central Europe. As varied as the demands placed on the manufacturers are the consulting companies ready to sell them their services. From Big Six firms with offices in all capital cities, to specialized boutique firms, to small local consulting companies.

### Avoiding Costly Mistakes

Newcomers to the Central European auto industry may avoid costly mistakes by seeking the counsel of consultants.

“These are all very, very, very bureaucratic countries,” said an advisor at a Big Six firm. “Go in with your eyes open, take the best advice possible, and use all your resources.”

Mistakes are most commonly made when companies attempt to value target property, conduct due diligences, establish a tax structure, determine the cost of restructuring existing companies, and register with the numerous public

authorities.

For example, one multinational company starting up operations in Slovakia has run into serious problems because it failed to properly register for VAT. The company already has its business plan drawn up and has started some work in the country, but its plans are stalled because of a stalemate with the tax authorities. Because the company didn't use the proper VAT registration channels, its application has been refused and the tax authorities aren't budging.

Tax mistakes are where companies can really take big hits. “Where tax authorities are involved, there's no concept of mercy, no forgiveness,” warned one consultant. “If tax authorities can catch you, they'll fine you and there's no way to get equitable treatment.”

Penalties for tax violations can be massive. Often, companies don't even realize they are creating a taxable presence in a country. If the problem is not resolved quickly and with the proper authorities, the fury of the tax man awaits.

### Helping Develop Local Supplier Base

Automotive companies face some unique problems as they expand their operations into Central Europe. One challenge is finding high quality local supply sources.

“The large manufacturers [in Central Europe] really know what they are doing in the automotive industry, but very often they're looking for large local supply content, which is where the trouble starts,” said Neil Strange, director of the Business Consulting Group in **Arthur Andersen's** Warsaw office.

“The local suppliers need to be brought up to the standards which the manufacturers are accustomed to receiving from Western [suppliers],” he

said. “We're focusing on getting together with the vehicle manufacturers, looking at their suppliers, and helping to raise the suppliers' standards to acceptable levels.” According to Strange, this requires reviewing the suppliers' operations, how they deliver to manufacturers, quality control, and staff education.

“We'll work with manufacturers' purchasing departments to improve their suppliers — we don't sell manufacturers things they already know.”

### Is it Worth the Price?

The advice and assistance provided by consulting companies do not come cheap. At one of the big international consulting firms in Warsaw, tax and company structure advice will cost you around \$150 an hour, and up to \$300 an hour if a senior tax consultant is involved.

Local consulting firm prices are generally about one-half to one-third of the prices at the international firms. Although cheaper, some local firms cannot provide the international scope offered by the big accounting and law firms. The local firm, however, may have a better understanding of local procedures and requirements.

If you're looking for advice on installing a computer system in your new subsidiary, project management fees at the international firms run around \$100 an hour per consultant. The number of consultants needed for project management jobs can be as few as 3 and as many as 70, and the job can run for months or even years. Given the long-term, high manpower nature of some of these projects, they often involve fixed price packages.

The business landscape in Central Europe can be quite unfriendly if you misstep. Companies doing business in the region should closely review their plans and capabilities and determine which activities might be best left to the experts ■

### New Expert Directories On-Line

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# Achieving Quality Improvement Success

## Building Supplier Quality: Lesson 2

With Ray Barker, Group Director, Business Excellence Strategy,  
Avon Rubber

**New Feature**

This month's column concentrates on how to achieve quality improvement success and how everybody's commitment within the operation can be harnessed towards achieving Total Quality. It is no secret that this transaction demands:

- leadership to ensure the required attitudinal culture (The Management Attitude)
- a well defined management process which indicates how to achieve what at every stage in the internal customer/supplier chain (The Management System).
- an ability to define and quantify a problem, an ability to solve problems utilizing well-established techniques, and harness the inputs of all team members (Tools and Techniques of Process Management)

### *The Management Attitude*

If our collective managerial attitude is one of believing that the present level of performance is good enough or, if not, that it cannot be improved, we can, at best, only "control" to these performance standards.

We must "break through" this barrier to create a managerial attitude which believes that the present level of performance is not good enough and that something can be done about it to ensure the continual upgrading of performance standards.

### *The Management System*

Almost all of the major external customers of a manufacturing operation expect that the supplier's system for the control of quality meets a particular standard. The standard varies with the customer. Whether the requirement is a national, international, or local company standard, the management system for quality is usually documented in the company's Quality Manual.

These requirements are not only concentrating on product quality. They relate to management procedures and affect all

departments within the company - all of which ultimately relate to how the customer views the supplier as a quality organization.

If a supplier does not comply with the procedure, they are in danger of losing their approved supplier status and with it - the business. These systems should not relate solely to product quality. The management system for quality is also important in the "service" areas. What do you think a customer's perceived view of the supplier's quality control system would be if, say, every 4th or 5th invoice he receives has an error in it?

A good management system is essential, but compliance to the system is not enough by itself. Don't forget we also need the "breakthrough" thought process, and our third ingredient: the tools and techniques of process management

### *The Tools and Techniques of Process Management*

A process is the transformation of a set of inputs, which can include actions, methods, and operations, into desired outputs, in the form of products, information, services, or, generally, results. In each area of an organization there are many processes taking place.

For example, the finance department may be involved in budgeting processes, accounting processes, salary and wage processes, costing processes, etc. Each process in every department or functional area can be analyzed by an examination of the inputs and outputs. This will determine the action necessary to improve quality.

The tools and techniques used to improve process management activities have generally been the tool-kit used by specialist quality practitioners. All managers must have access to this tool-kit and have an understanding of how the tools may be used to best advantage within their area of activity, to assist with continuous improvement.

The use of factual information, collected and presented using statistical

techniques, opens a channel of communication not available through other problem solving methods. Continuous improvement in the quality of products and services can be obtained without major capital investments if all levels of an organization are part of the problem solving team.

By using reliable and disciplined methods for problem solving, and by focusing on the use of statistical tools, an upward spiral of never-ending improvement can be attained in any organization - the theme of Total Quality Management.

Process control requires us to manage real-time data, acting on information from the process, not the product. It requires an ability to speak in the language not of percentage rejects but process capability. Special cause variation must be identified so that it is killed off forever and common cause variation must have a management plan to reduce the extent of its effect.

The management climate must be such that there is a dismissal of the quality tradition which says "If it meets the specification its OK. No further improvement need be made."

The optimum must be determined - that which really makes the customer happy. This must become the target and improvements must continually be sought to reduce the variability and to increase the process capability in order to achieve the maximum uniformity around the target value that state-of-the-art technology will allow.

*Continued on Page 18*

### **Quality in Action**

Delphi Poland's purchasing organization is staffed with supply and development engineers who contact potential suppliers, evaluate them, and, if necessary, work with the suppliers to help them improve their quality.

To improve the local supply base, GM/Opel focuses on cooperation in the pre-production phase through training and know-how systems transfer.

*Profile Continued from Page 1*

expected to rise to 200 over the next year.

Since April 1 of this year, Ryszard Jania has been the plant manager and executive board member of Pilkington Automotive Poland. Prior to this, he was chief operating officer of Pilkington Sandoglass, co-ordinating Pilkington's automotive activities in Poland. He started with Pilkington Sandoglass in 1995.

Mr. Jania graduated from the Krakow Academy of Economics, and since the beginning of the 1990s has been active in regional economic development issues through his role as advisor to the president of the Polish Foreign Investment Agency.

The CEAR spoke with Mr. Jania in Warsaw in February.

**CEAR: Why did Pilkington decide to build a new plant in Poland?**

**Jania:** With the expansion of industry in Poland, Pilkington saw that it needed to expand its production and in 1997 the company decided to build a new plant for toughened glass components.

But in fact, the project developed so well that Pilkington decided that the new plant would also produce laminated glass. Thus, a very modern laminating plant is being commissioned. This plant will be wholly-owned by Pilkington.

**CEAR: When will the new plant come on line?**

**Jania:** As of today, we are in the phase of completing the construction of the building and installing equipment. For toughened parts, production will start in September of this year.

Production of windscreen glass will come later and will be an expansion of the existing plant's range of production. The new plant will produce windscreens mainly for new models being introduced by car manufacturers in Poland.

**CEAR: Who are your major customers?**

**Jania:** Pilkington decided to build in Poland to service the Polish market. All of its production is for plants based [in

Poland]. Our main customers are **General Motors, Ford, Daewoo, and Fiat.** Fiat is the largest. In addition, [we supply] all of the commercial vehicle manufacturers — **Autosan, Star, and Jelcz.**

**CEAR: So you are the biggest automotive glass producer in Poland?**

**Jania:** We are in automotive glass. This has much to do with the history of the Polish glass industry and decisions taken

“In 1997, we produced 100% of the windscreen production output in Poland. This 100% market share obviously cannot remain with the arrival of the new Saint Gobain plant.”

15-20 years ago. With all companies being owned by the state, it was decided by the government that windscreens would only be produced in Sandomierz and that side windows and back windows would only be produced in Kunice. The Sandomierz [factory] went to Pilkington and the Kunice [factory] to **Saint Gobain.** This is very much the case today.

**CEAR: So, it's the same the world over, Saint Gobain and Pilkington in direct competition in a country?**

**Jania:** Yes, very much so. As far as I know, Saint Gobain is also building a new plant [in Poland] for both windscreens and side windows. As it stands today, we dominate in windscreens and they dominate in side windows, but both [companies] are making moves into the other's area.

**CEAR: Is it the same situation in the aftermarket?**

**Jania:** The aftermarket is a crazy market in Poland. Who dominates? You cannot look at this only from a production point of view, but [you must also consider] distribution. In Poland, Pilkington has its own distributor, **Lamino Poland,** but also has a network of independent distributors. Saint Gobain has a similar structure.

But these are not the strongest [networks] in the market. For traditional Polish cars like Fiat 126's and the Polonez, the largest distributor is **Hurtownia Szkla Zary Kunice** — one of the former state-owned Polmozbyts that dealt with all aspects of automotive retailing — which retains its distribution network all over Poland. Both Saint Gobain and Pilkington supply them. For imported parts, there are numerous small distributors importing from wherever.

**CEAR: What makes the aftermarket in Poland so unusual?**

**Jania:** In Poland, we have a lot of small distributors that buy from all over, so its possible to find in Poland, for example, windscreens for a Polish car that are produced in Spain.

For me it's very difficult to understand how those windscreens can be cheaper than ours, but this is an example of how unpredictable it can be. This is probably because the groups of small distributors catch on to a situation that's very hot and don't think about how to develop their business and they don't have solid sources of supply.

**CEAR: But Pilkington's emphasis is on OEM production?**

**Jania:** Yes, 90% of Pilkington's production is for OEM. Up until now, Pilkington has been less interested in producing short runs for a wide range of cars. But when the new plant is on stream, there will be a possibility to produce shorter campaigns with the introduction of new technology in the old plant, enabling us to be more flexible.

**CEAR: What is your current production output and what are your plans for the future?**

**Jania:** In 1997, we produced around 400,000 windscreens. This is currently 100% of production output in Poland. This 100% market share obviously cannot remain with the arrival of the new Saint Gobain plant. I cannot give you exact figures for the future, though you will appreciate that we have built our predictions on the demand forecasts from the major producers. Our forecasts basically depend on theirs.

We expect to be producing over 500,000 windscreens in the year 2000. Suffice it to say, we will be supplying **Ford, GM,**

**Daewoo**, and **Fiat** in the future with windscreens and we will greatly increase the supply of side windows and rear windows. In the year 2000, we still expect to have the largest market share in windscreens and to greatly increase our market share in side windows and rear windows.

**CEAR: How do you handle logistics in Poland?**

**Jania:** We have two kinds of customers. One comes to us with their own transportation and takes our product. The other, we deliver to them at their sites. We don't have any big problems today.

We're preparing ourselves to supply the new **General Motors** plant in Gliwice and for the changes that **Fiat** has made at its plants in Bielsko Biala and Tychy. We'll do whatever is necessary to provide them with just-in-time supply.

**CEAR: Do you buy any of your supplies locally?**

**Jania:** Most of our raw materials we import, such as PVB interlayer, ceramic paints and mirror mounts. Glass, the biggest part of our costs, we buy locally from Pilkington Sandoglass.

**CEAR: How do you motivate your workers?**

**Jania:** The best motivation in Poland is still money. But certainly, we can offer our workers training in plants in Europe, high standards of work, challenging situations, constant improvement. Investing in people is what we do.

**CEAR: What's an important trend in your industry and how are you reacting to it?**

**Jania:** We're not only a supplier of glass today, but more and more we are becoming a supplier of glazing systems. This means that there will usually be something attached to the glass like plastic or metal parts or special extruded or encapsulated profiles, [especially] for side and back light sets. This is already standard in the more developed countries where the automotive industry is [more advanced]. In fact, it's not very popular in Poland yet because the big auto companies decided to start in Poland with older models that don't require these kinds of parts. But we're sure that with the development of the automotive industry we'll [be involved in] some-

thing more than just glass.

We know how the other plants in the Pilkington group are prepared to deliver these kinds of services to their customers in Italy, Spain, Germany, and England. If a market for these parts [develops] that will justify investment in this kind of

“The whole business should guarantee that at the end the final product is perfect. So it's more than just the quality of the product.”

production, we'll certainly do it.

**CEAR: Where do you expect Pilkington Automotive Poland to be in 5 years?**

**Jania:** The new plant will be working at full capacity and producing over 500,000 full glass sets per annum. We will also have a reasonable part of the after-market and we will see greater expansion of our distributor **Lamino Poland**. We will expand our range of production at the old plant to supply the imported car aftermarket, and we expect that this will be between 20-25% of the company's total business in the future.

**CEAR: Do you use any unique marketing strategies?**

**Jania:** Pilkington is a very centralized organization. In Poland we do only a small amount of marketing — our marketing strategy is part of the global marketing strategy decided at a very high level in Europe.

So if there's a quotation request from a customer, it's usually analyzed by logistics and key account manager teams and then it's decided which plant in Europe will produce the product. Even if the request for a quotation comes to us, we usually consult or even send it to the logistics and key account teams.

The part of marketing that we do in Poland is market observation, contact with our customers, and servicing our distributors.

**CEAR: What are the most challenging aspects of your job in Poland?**

**Jania:** One the most difficult issues has been adherence to each individual automotive company's quality systems. Not the quality standards, but the systems. ISO 9000 is just the start — every company has its own specific additions to this.

We are sure that our products meet all the quality requirements and have no problems with the client with regard to the product. But the documentation is very difficult to comply with. However, overcoming this is just a question of time and experience. This applies not just to Pilkington, but to all Polish component manufacturers.

**CEAR: How are you ensuring that your products meet the highest quality standards?**

**Jania:** Today, we're not talking only about the quality of the product because it's taken for granted that it must be perfect. But we're talking about quality assurance systems that concern the whole company — how we work to deliver the best quality product.

The quality of the product includes how we buy materials, how we deliver them, how we're prepared organizationally to do our business. Not only production. The whole business should guarantee that at the end the final product is perfect. So it's more than just the quality of the product

**CEAR: What has been a big surprise for you during your involvement in the Polish automotive industry?**

**Jania:** I wouldn't call it a surprise, but there are Korean companies in Poland with very optimistic ideas and I think that most Polish companies involved in the automotive industry decided to [build up their operations] based on those ideas and promises. I'm not 100% sure that this is the right perspective. What we have are lots of high hopes today and let's hope that it's not only hope ■

*Improving the technological capabilities of Russian vehicle manufacturers is an essential first step in the rehabilitation of those companies. Below are remarks made last November by Vladimir Sablin, Deputy Minister of Industrial Policy, Moscow City Government, regarding the reconstruction and performance of Moscow motor plants. The remarks were made at a Euroforum automotive conference held in Moscow.*

Understandably enough, technology has always been a strong point of the automobile industry. It is well known that in terms of basic technological parameters, automobile manufacturing leads the way in Russian engineering.

At the same time, the industry, including Moscow companies, considerably lags behind foreign companies in terms of several major parameters. For instance, a lag in technological labor input is estimated at 30-40%, and the automation level of assembly works does not exceed 8%, which is almost three times less than in the US.

The Moscow automobile industry faces a number of important tasks, namely

ensuring an adequate level of output and product competitiveness, accelerating pre-production and model changes, and achieving an optimum level of profitability. To attain these goals, it is vital to focus on the technological development of plants.

It should not be forgotten that the payback period for investments in technology is from six months to two years, and a 1% reduction in labor input saves the labor of three to four thousand workers. These performance parameters are especially important under new economic conditions requiring a relatively short payback period.

Currently, when the volume of production has markedly dropped and new models with other production programs are being introduced, a most important objective is to optimize old capacities. This should ensure good economic indicators such as returns on assets, cost price and labor input. The [key] issue is to use optimum technologies involving modernization or partial replacement of equipment that is geared to super mass production.

The current situation in the automobile industry offers plenty of opportunities for production engineers — both at automobile plants and Moscow research institutes — to raise the technological development level using, among other things, bypass technologies to speed up the switch to new models.

Major research institutes in the automobile industry have recently been tackling the problems of Moscow car manufacturing. The most active among them is **NIITavtoprom**, a long-standing reliable technological partner of **ZIL** and **AZLK**.

Recently approved were the Institute's proposals for ZIL's comprehensive development program. The proposals included an analysis of the car and truck fleet of Russia and Moscow, determination of the competitive mix of goods and their concrete production dates, an outline of major retooling and technological development stages, and a financial scheme to ensure production profitability ■

## Russia & CIS News

### Autoliv Secures First Seat Supply Contract in Russia

**Autoliv Inc.** has entered into a contract with **Moskvich**, Russia's fourth largest auto manufacturer, for the supply of seat frames, head rest frames, safety belts, and plastic parts for seats in all Moskvich cars.

In September, Autoliv will start shipping from its facilities in Sweden parts for 30,000 cars. After approximately one year, when the company expects volumes to increase 4-5 times, production will be localized to a new plant which Autoliv will build in the vicinity of Moskvich's plant in Moscow. At the same location a new joint venture between Moskvich and **Renault** will manufacture the Renault Megane.

Seat belts will be assembled at Autoliv's Russian plant in Dubna, north of Moscow, from the start of the cooperation between the two companies. Autoliv began seat belt deliveries to Russia in 1996 and opened its Dubna seat belt plant in 1997. This year, the company expects to deliver a half a million seat belts to the largest Russian automaker, **AutoVaz**. Autoliv recently secured seat belt contracts from other auto manufacturers in Russia.

### Daewoo Selling Back Kazak Telecom Stake to Fund Ukraine Auto Investment

**Daewoo Group** Chairman Kim Woo-Choong said in March that the group will sell back its 40% stake in **Kazak**

**Telecom**, which is valued at \$150 million, and invest the proceeds into its Ukraine vehicle venture.

He also said that **Daewoo Motor** agreed early in March to produce its mid-sized sedans and smaller cars in Ukraine this year in a joint venture with **AvtoZAZ**.

### Tatra to Set Up Joint Venture in Uzbekistan

The Czech truck maker **Tatra Koprivnice** expected to sign an agreement in April to set up a joint venture in Uzbekistan, the company's external relations section director Ivo Celechovsky told the Czech News Agency, CTK. According to CTK, Tatra will own around 60 percent of the plant and production is expected to start in August ■

# Investors Sought With New Ordinances in Romania — Advertising Deductions Now Available — Compulsory Government Issued Invoice Paper

## Romania Tax, Customs, & Finance Update

Ron Barden, Director of Taxation, Price Waterhouse, Romania

Effective December 30, 1997, the Romanian government abrogated the vast majority of the foreign investment ordinances issued in June 1997 (Ordinance 31) and introduced a new Emergency Ordinance 92/1997. The new ordinance is applicable to all investments made in Romania by residents and non-residents, excluding portfolio investments — at this time, Ordinance 31 shall continue to apply to portfolio investments made by non-residents.

According to “Ordinance 92” an investment is defined as:

- a) The contribution to the establishment or development of an enterprise under any legal form;
- b) The acquisition of shares of a company (except portfolio);
- c) The establishment of a branch of a foreign company in Romania.

Apart from guarantees against nationalization and discrimination, the ordinance provides for a number of fiscal incentives. These include:

- Customs and VAT exemption on the importation of moveable goods which represent contribution in kind to the social capital of a company or contribution to an association in participation or family association;
- Customs exemption for the importation of specific technological equipment (a definitive list of such equipment will be issued by governmental decision);
- A five year loss carry forward regime; and
- The choice of either accelerated depreciation for depreciable assets (excluding buildings) or what appears to be a 20% investment allowance applicable to the acquisition price of technological equipment. Accelerated depreciation involves the claiming of 50% of the asset cost in the first year as depreciation expense

followed by standard straight-line depreciation in subsequent years.

The ordinance provides for the issuance of methodological norms within 30 days and these norms should clarify a number of uncertainties.

**“For direct foreign investments above \$350,000, the incentives provided include a 15% profits tax rate for two years, and a 50% customs duty reduction on raw materials for two years.”**

The ordinance then abrogates the 6.2% branch profits tax to ensure that such investments are now on equal footing with other forms of investments.

### Ordinance 31 Methodological Norms

Although the Investment Ordinance 92/1972 abrogates most of the previous foreign investment ordinances, foreign investments made during the period of June 19, 1997 to December 29, 1997 may finally be in a position to take advantage of the incentives provided by ordinance 31/1997, as the government has issued the methodological norms to apply the ordinance.

The incentives provided by that ordinance include a 15% profits tax rate for two years, and a 50% customs duty reduction on raw materials for two years where direct foreign investments were in excess of \$350,000. Additional incentives were to be made available for direct investments exceeding \$5 million, subject to additional criteria.

Similar incentives were to be made available related to companies purchased from the state ownership fund for more than \$1 million, again subject to

additional criteria. This additional criteria has now been clarified by the issuance of methodological norms.

### Point System

Incentive levels are determined pursuant to a point system. Points are made available based on the size and scope of the investment. For each \$1 million invested, the project is allocated between 2 and 20 points (depending on the specific industry - for example 2 points for the financial services industry and 20 points for the telecommunications industry). Additional points are awarded for export revenues, profit reinvestment, environmental protection, and for investments in technological centers.

The norms provide for an allocation of points based upon certain characteristics of the investment. When the total points reach a certain level, then specific incentives apply.

In respect of direct investments, if 200 points are achieved, the 15% tax rate is applicable for a total of seven years, while 100 points allows for the 50% customs duty reduction on raw materials to be extended to five years. 300 points would have entitled a foreign investor to both the additional incentives.

If a foreign investor purchased a company for more than \$1 million from the state ownership fund during the period June 19, 1997 to December 30, 1997, then that investment may also be entitled to a number of tax incentives. These include a 15% profits tax rate for five years, a 50% customs duty reduction for four years, and customs exemption on importation of specific equipment for eight years.

To obtain these incentives, the investment must obtain 150 points, with specific points applying to various criteria. These criteria include the size of the investment plan as compared to the initial purchase price, the proportion of export earnings, increase in employment, and the degree of integration of production.

The norms also confirm that for any of the above mentioned incentives to apply, a foreign investor needs to obtain a foreign investor certificate from the Romanian Development Agency (RDA). The RDA had not been in a position to

*Continued on Page 20*

## Top Selling Passenger Car Brands in Romania (in units)

### Top Selling Passenger Car Brands in Romania (units sold)

Company	1997	1996	% Change
Dacia	81,644	68,460	19.25%
Daewoo	6,511	22,374	-70.89%
ARO	1,545	3,069	-49.65%
Volkswagen	1,280	203	500.30%
Skoda	459	447	2.68%
Ford	418	447	-6.48%
Fiat	294	59	398.30%
Renault	216	128	68.75%
Mercedes Benz	192	157	22.29%
Nissan	154	96	60.41%
Mitsubishi	128	19	573.68%
Kia	121	140	-13.57%
Opel	114	208	-45.19%
Hyundai	106	242	-56.19%

Source: APIA

## World Vehicle Production

Worldwide production of motor vehicles rose 5.5% to a record level last year, according to the **International Organization of Motor Vehicle Manufacturers (OICA)**.

According to data collected by OICA:

- World car production, at 38.8 million units, increased 5.4%;
- World light commercial vehicle production, at 12.9 million units, rose 4.7%;
- World industrial vehicle production, at 2.3 million units, jumped 11%;
- World bus and coach production, at 160,000 units, increased by 7%;
- Global motor vehicle exports of 22.1 million units grew even faster than production with a 10% increase;
- In the U.S., car and truck production by Chrysler, Ford, and General Motors increased 2.6%, to more than 9.5 million units.

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## Romanian Car Exports (in units)

Company	Model	1997	1996	% Change
ARO	10 (1.4 liter)	313	725	-56.82%
	10 (1.9 liter diesel)	769	948	-18.88%
	24 (2.5 liter)	347	573	-39.44%
Dacia	24 (2.5-3.2 liter diesel)	26	333	-92.19%
	Berlina 1.4 liter	723	1,633	-55.72%
	Break 1.4 liter	65	1,043	-93.76%
Daewoo	Nova 1.6 liter	1,109	45	2,364.44%
	Cielo 1.5 liter	14,634	0	-
	Espero 1.8 liter	6	0	-
<b>TOTAL</b>		17,992	5,300	239%

Source: APIA

## Romanian Production & Assembly (in units)

Company	Model	1997	1996	% Change
ARO	10 (1.4 liter)	402	1,236	-67.47%
	10 (1.9 liter diesel)	920	974	-5.54%
	24 (2.5 liter)	636	1,550	-58.96%
	24 (2.5-3.2 liter diesel)	948	1,371	-30.85%
Dacia	Berlina 1.4 liter	59,351	48,827	21.55%
	Break 1.4 liter	16,960	17,996	-5.75%
	Nova 1.6 liter	7,080	3,937	79.83%
Daewoo	Cielo 1.5 liter	21,414	22,008	-2.69%
	Espero 1.5 liter	981	0	-
	Espero 1.8 liter	497	24	1,970%
<b>TOTAL</b>		109,189	97,923	11.50%

Source: APIA

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  
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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  
re: Pemu ITDH  
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

Russian bus company seeks American joint venture partner to manufacture new bus models. Business plan available in English  
Victor Sergeevich Kostromin  
General Director  
Pavlovo Bus Co.  
tel: 7-83171-6-81-14  
fax: 7-83171-6-03-18  
Russia

Russian company seeks a joint venture partner to rebuild car and truck tires and recycle tires and other rubber products into pellets.  
Alexander Nikolayevich Kalin  
General Director  
Kstovo Tire Repair & Recycling Plant  
Tel: 7-8312-38-12-75  
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As for Paneuro's strengths and weaknesses, Mr. Prosszer doesn't just point to customer orientation and flexibility — "these are pre-requisites in this business" — but to the top quality of their products, wide range of supply, state-of-the-art logistics, high level of warranties, and the technical skills of the employees.

As quality has its price, Paneuro's prices are high for some items. However, Mr. Prosszer believes that market trends will continue to support the company's growth prospects. "We see a clear orientation of the people towards better quality products and services."

To offer its broad range of products, Paneuro is also burdened by large inventories. "Since we want to supply our customers with tens of thousands of different OEM items, we have to have large stocks," said Prosszer. "This obviously creates a need for large working capital and leads to low inventory turnover — but that's the price we have to pay for full customer satisfaction."

Catalin Dimofte (Bucharest)

Quality Continued from Page 11

The driving force behind Process Management must be superior internal and external customer satisfaction levels, in turn leading to the theme of continuous improvement - "No matter how good we are, we can do better."

An intimate knowledge and understanding of the applicability of SPC techniques is essential. For this, in most companies, a massive training program is required. As Junji Noguchi, a Director of the Union of Japanese Scientists and Engineers (JUSE), constantly reminds his visitors, "Quality begins and ends with Education."

Next Month: Quality Expectations in the Global Automotive Industry

- and air-fuel charging assemblies
- **Denso Corp.** — investing \$100 million into a new diesel injection pump factory in Szekesfehervar. Production is expected to begin in June 1999.
- **Thomas & Betts Hungary Ltd.** — produces electrical components
- **ITT Automotive Hungary** — makes electrical switches, lights, windshield wiper systems, and ABS sensors, primarily for export
- **Bakony Muvek** — maker of ignition switches, distributors, and spark plugs; undergoing reorganization
- **Robert Bosch Kft** -- car CD player assembly
- **Delphi Packard Electric** -- makes wiring harnesses and bundles
- **Perion Battery Factory** — produces lead acid, Ni-Cd, and dry cell batteries
- **Clarion Co., Ltd.** — investing over \$19 million into a new Hungarian factory to manufacture car audio equipment and electronic parts. Production is expected to begin in January 1999, and by the year 2000 the company plans to employ 700 workers
- **Tungsum (GE)** -- supplies electric lights to major auto companies
- **UT Automotive** -- makes wire cables and harnesses, fuse boxes, and junction boxes
- **Hella KG** — maintains a presence in Hungary through aftermarket distribution and attempting to build a customer base in the original spare parts market

Slovak Republic

- **Volkswagen Elektricke Systemy** — makes cable systems
- **Yazaki Debnar Slovakia** — produces wiring harnesses at new facility

Romania

- **Delphi** — new factory produces wiring harnesses
- **Electroprecizia** — makes electromechanical automotive components and devices, including alternators, voltage regulators, starters, transducers, temperature switches, and relays

Slovenia

- **Hella KG** — purchased a 50.5% stake in Slovenian headlight maker **Saturnus AO** last year
- **Resistec** — produces custom designed, cement-coated and unprotected wire wound resistors for auto air conditioning systems
- **Iskra Avtoelektrika** — produces auto electrical products such as starters, alternators, D.C. motors, pulse controllers, ignition coils, voltage regulators, and ignition modules
- **Eled** — car fuse production
- **Elba** — produces brake light switches, and warning light switches

Highlights Continued from Page 4

**Auto** ranked number one with 2,211 vehicles sold in February, for a market share of more than 42%. **Daewoo** holds on to the number two spot with a market share of more than 12% and sales of 632 units. **Volkswagen** is close behind in third place with sales of 537 units and a 10.1% market share.

The field is rounded out by **Fiat** (295 units, 7.85%), **Opel** (274 units, 5.65%) and **Seat** (135 units, 2.6%). **Volkswagen AG** brands (VW, **Audi**, **Skoda**, and **Seat**) together captured a market share of more than 55%.

Slovenia

1st Quarter New Car Sales Up 6% in Slovenia

During the first quarter of 1998, new car sales in Slovenia were up 6.1%. At the end of March, 16,135 units were sold, compared with 15,206 units sold during the same period last year.

**Renault** was the top selling brand with 2,823 units sold, giving the company a market share of 17.5%. Renault, who produces cars locally at its Revoz plant, is facing tough competition on the Slovenian market. At this time last year, its market share was a healthier 21.37%.

**Volkswagen** is the second best selling brand with 1,964 units sold, capturing a market share of 12.17%. **Daewoo**, who sold 1,594 units, watched its market share jump over 200% to 9.88%, compared to 3.28% a year earlier

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| Czech Republic..... | Hungary.....         |
| Poland.....         | Romania.....         |
| Russia.....         | Slovak Republic..... |
| Slovenia.....       | Ukraine.....         |
| Other.....          |                      |

**3. Name your two most important print or information sources for both news and automotive information covering Central Europe?**

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1. \_\_\_\_\_ 2. \_\_\_\_\_
- Automotive Information:
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**MAY98**

## Submit Your Nominations for the 1998 CEAR™ Central European Automotive Excellence Award

The CENTRAL EUROPE AUTOMOTIVE REPORT™ is accepting nominations for the 1998 CEAR™ Central European Automotive Excellence Award. This award will be presented to the Central European automotive manufacturer or supplier that has best demonstrated market leadership through its use of innovative manufacturing and marketing systems. The award is given to recognize the positive influence such exemplary leadership has on the development of the Central European automotive sector.

We would greatly appreciate your input in nominating candidates for this award. You may nominate your own company or others. The deadline for nominations is August 15, 1998.

1st Nominee \_\_\_\_\_ Reasons \_\_\_\_\_

2nd Nominee \_\_\_\_\_ Reasons \_\_\_\_\_

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issue these certificates until the publication of these norms but should now be in a position to do so.

However, effective from January 1, 1998, the RDA was transformed into the department for promoting foreign investments, so the actual issue of obtaining an investors certificate remains somewhat unclear.

**ADVERTISING DEDUCTIBILITY INSTITUTED IN ROMANIA**

In a move highly welcomed by both domestic and foreign investors, the Romanian government has amended the profits tax legislation to allow full tax deductibility of advertising and promotional expenses. This amendment came into effect January 1, 1998 and also impacts the recoverability of VAT on such expenditures. This brings Romania

in line with international practice and the more developed countries of Eastern Europe.

This amendment does not affect the limited deductibility of protocol expenses, which is limited to 1% of net profit.

**COMPULSORY USE OF GOVERNMENT ISSUED INVOICE PAPER**

The Romanian government has determined that economic agents doing business in Romania should use government provided paper to print invoices and other internal and external documents.

Effect from January 1, 1998, the government has introduced a new regime for the issuance of invoices, receipts, and delivery notes. From that date, businesses are required to either use

government issued pre-printed documents or prepare such documentation on specific purpose paper purchased from the government printers or other approved printers.

This is a significant change from a previous regulation that enabled larger companies to obtain invoice numbers from the ministry of finance and prepare invoices on their own paper, albeit in a format approved by the Ministry.

This governmental decision does allow for the Ministry to approve exceptions to these provisions, but no explanation has been issued in this regard. **On the other hand, the issuance of invoices on non-approved paper would be considered an illegal activity.** Consequently, expenses paid on the basis of such invoices would be considered non-deductible in the hands of the paying entity and could be confiscated from the recipient ■

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**Exhibitions, Conferences, and Shows in 1998 & 1999**

<b>1998</b>			
May 12-14	<b>Detroit, MI</b>	SAE Int'l Automotive Manufacturing Conference & Exhib.	Oct. 29-Nov. 8
May 12-14	<b>Göteborg, Sweden</b>	Vehicle Industry Suppliers and Buyers Expos	Nov. 4-7
May 22-27	<b>Poznan, Poland</b>	Int'l Automotive Show	Nov. 4-8
May 29-June 7	<b>Porto, Portugal</b>	Int'l Motor Show	Nov. 5-8
June 2-5	<b>Düsseldorf, Germany</b>	Int'l Symposium on Automotive Technology & Automation	Nov. 14-22
June 3-14	<b>Buenos Aires, Argentina</b>	Auto Show	Nov. 12-15
June 6-11	<b>Brno, Czech Republic</b>	AutoTec	Nov. 17-21
June 18-20	<b>Beijing, China</b>	Automotive Sourcing in China	Nov. 26- Dec. 6
June 23-30	<b>Beijing, China</b>	Auto China '98	Nov. 27-Dec. 6
June 22-27	<b>Kiev, Ukraine</b>	Auto Show	Nov. 30-Dec. 2
June 24-28	<b>Rio de Janeiro, Brazil</b>	Auto Brazil 98	Dec. 2-5
August 26-30	<b>Moscow, Russia</b>	Moscow Int'l Motor Show	Dec.
Sept. 3-10	<b>Hanover, Germany</b>	Int'l Motor Show for Commercial Vehicles	<b>1999</b>
Sept. 15-20	<b>Nitra, Slovakia</b>	Autosalon Nitra	Jan. 16-24
Sept. 15-20	<b>Frankfurt, Germany</b>	Automechanika	Feb. 4-14
Sept. 18-27	<b>Bucharest, Romania</b>	Bucharest Motor Show	March 11-21
Sept. 27-Oct. 1	<b>Paris, France</b>	FISITA Congress	April 8-16
Sept. 29-Oct. 4	<b>Budapest, Hungary</b>	Autotechnika	May 22-30
Oct. 1-3	<b>Brussels, Belgium</b>	Int'l Electric Vehicle Symposium	May 27-June 1
Oct. 1-11	<b>Paris, France</b>	Int'l Road Transport Exhibition	Nov. 13-21
Oct. 1-11	<b>Paris, France</b>	Int'l Paris Motor Show	<b>Brussels, Belgium</b>
Oct. 6-8	<b>Detroit, MI</b>	Global Powertrain Congress	<b>Amsterdam, The Netherlands</b>
Oct. 8-12	<b>Ho Chi Minh City, Vietnam</b>	Auto Vietnam 98	<b>Geneva, Switzerland</b>
Oct. 13-15	<b>Amsterdam, The Netherlands</b>	InterAuto '98	<b>Stockholm, Sweden</b>
Oct. 16-25	<b>Sydney, Australia</b>	Int'l Motor Show	<b>Barcelona, Spain</b>
Oct. 23-Nov. 1	<b>Birmingham, UK</b>	British Int'l Motor Show	<b>Poznan, Poland</b>
Oct. 29-Nov. 1	<b>Istanbul, Turkey</b>	Commercial Vehicles '98	<b>Athens, Greece</b>
			<b>Sao Paulo, Brazil</b>
			Brazil Int'l Automobile Trade Show
			<b>Bangkok, Thailand</b>
			Asia Automotive '98
			<b>St. Petersburg, Russia</b>
			St. Petersburg Auto & Service Show
			<b>Istanbul, Turkey</b>
			Auto Show
			<b>Suntec City, Singapore</b>
			Singapore Motor Show
			<b>Cairo, Egypt</b>
			Cairo Motor Show
			<b>Sofia, Bulgaria</b>
			Bulgaria Int'l Specialized Trade Show
			<b>Montevideo, Uruguay</b>
			Montevideo Motor Show
			<b>Essen, Germany</b>
			Essen Motor Show
			<b>Graz, Austria</b>
			SAE Total Life Cycle Conference & Exposition
			<b>Jakarta, Indonesia</b>
			Indonesia Auto Show
			<b>Detroit, MI</b>
			SAE Global Vehicle Development Conference
			<b>Brussels, Belgium</b>
			Brussels Int'l Motor Show
			<b>Amsterdam, The Netherlands</b>
			Int'l Motor Show
			<b>Geneva, Switzerland</b>
			Geneva Int'l Motor Show
			<b>Stockholm, Sweden</b>
			Stockholm Int'l Motor Show
			<b>Barcelona, Spain</b>
			Barcelona Int'l Motor Show
			<b>Poznan, Poland</b>
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**Romanian New Vehicle Sales (in units)**

	1997	1996	% Change
<b>Passenger Cars</b>	93,724	96,754	-3.13%
<b>Light Commercial Vehicles</b>	17,874	15,003	19.13%
<b>Commercial Vehicles (3.5-7 ton)</b>	584	1,865	-68.68%
<b>Commercial Vehicles (over 7 ton)</b>	1,918	3,890	-50.69%
<b>Buses</b>			
Up to 15 places	240	108	122.22%
Over 15 places	262	504	-48.01%
<b>TOTAL</b>	114,602	118,124	-2.98%

Source: APIA

**Too Much Info for the Print Edition. Email Subscribers get:**

1. Best Selling Brands in Poland
2. Polish Vehicle Market Segmentation
3. This issue including the extra information listed above delivered to their desk on April 25th.

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# Gerodisc Traction Technology Keeps Vehicles Hugging Road

## New Product Review

### ASHA Corporation's (ASHA)

Gerodisc technology is redefining the concept of traction control. In late January 1998, the company completed signing a series of broad-based license agreements with **New Venture Gear, Incorporated (NVG)**, for the use of this technology.

New Venture Gear, the world's largest manufacturer and designer of transfer cases for four-wheel-drive vehicles, was the first company in the world to license, develop, and commercialize ASHA's Gerodiscs traction technology. Initial market introduction of NVG's all-new Progressive Transfer Case with ASHA technology debuts later this year in Chrysler's new Quadra-Drive™ four-wheel drive system on the 1999 Jeep Grand Cherokee.

### What is Gerodisc?

Gerodisc is an automatic hydro mechanical traction control device. Its self-activating nature can prevent wheel spin and improve traction and handling on all four types of vehicle platforms: front-wheel drive, rear-wheel drive, four-wheel drive and all-wheel drive.

When road conditions or weather cause wheels to lose traction and spin freely, Gerodisc transfers torque away from the

spinning wheel to the wheel with traction. Benefits of the system include enhanced safety and handling, reduced wear on brakes and drivetrain, and reduced weight.

### How Does Gerodisc Differ From Conventional Traction Control Systems?

Unlike electronic traction control systems which reduce wheel spin by limiting power to a vehicle's driven wheels, Gerodisc transmits power to the wheels in proportion to the traction available at each driven wheel.

The ability of Gerodisc to provide a traction patch for each driven wheel also differs from a conventional mechanical limited slip differential which only provides one traction patch per axle. According to ASHA, Gerodisc is also smaller, lighter, and quicker than conventional traction control differentials and does not introduce noise, vibration, or harshness into a vehicle.

Gerodisc incorporates a hydraulic pump section, a piston, and a clutch pack. It has been designed as a "clean sheet" approach not tied to a prior technology nor to a dedicated manufacturing process.

Gerodisc is compatible with existing ABS and traction control systems, with or without engine management capability, and is compatible with most mini-spare tires. All known vehicle driveline architectures can use the system, including heavy duty trucks and commercial off-road vehicles. It does not require special or dedicated hydraulic mediums or electronic interface.

The Gerodisc system eliminates some expensive components used in 4WD and All-Wheel drive vehicles, such as two differentials and/or viscous couplings, thereby lowering the weight of such vehicles. With less weight, components, mechanical stress, and transmission windup, the system provides better fuel economy and maximum traction.

The function and engagement of Gerodisc is completely transparent to the vehicle operator, which is particularly critical in FWD applications. Gerodisc is available in two basic configurations: Speed sensitive and Torque/Speed sensitive.

Although ASHA is focused on the commercial applications for its Gerodisc technology, the company is also working with two European automobile manufacturers, **Automobile Peugeot** and **Williams Touring Car Engineering Ltd.**, who are both interested in using Gerodisc in their cars on the European racing circuit.

## New Car Registrations Growth in Europe (YTD February 98)

	<u>Country</u>	<u>1998</u>	<u>1997</u>	<u>% Change</u>
1	Germany**	541,700	525,700	3.04
2	Italy**	491,900	398,800	23.35
3	U.K.	409,200	370,500	10.45
4	France	277,500	255,400	8.65
5	Spain**	160,100	141,600	13.06
6	Netherlands**	119,200	113,200	5.30
7	Belgium	91,100	83,600	8.97
8	Poland*	84,447	85,252	-0.94
9	Austria**	47,600	44,900	6.01
10	Switzerland**	40,800	41,200	-0.97
11	Ireland**	39,100	35,200	11.08
12	Sweden	36,400	31,300	16.29
13	Portugal**	33,500	33,500	0.00
14	Greece**	31,800	28,700	10.80
15	Denmark**	23,300	22,700	2.64
16	Finland	23,300	21,400	8.88
17	Norway	16,500	20,900	-21.05
18	Luxembourg	5,900	6,100	-3.28

Source: SAMAR, s.c.

\*Grey import not included

\*\* Provisional figures

## FUTURE ISSUES

**Poland's Special Economic Zones**

**Quality Improvement Lesson 3**

**Skoda's Detlef Wittig**

**Slovak Car Park Analysis**

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## TRW Holding Steady in the Czech Republic Company Spotlight

**Company:** TRW Autoelektronika  
**Location:** Benesov, Czech Republic  
**Contact:** Jiri Hocek, Sales Manager  
**Business:** switches, electronic modules

On the scene since May of 1992, TRW's Czech Republic subsidiary in Benesov has enjoyed strong growth. Employment at the company has grown from 168 employees at the end of 1992 to 600 in 1997. Turnover jumped from CZK 32 million (\$950,000) in 1992 to about CZK 800 million (\$24 million) in 1997, and is expected to hit CZK 1 billion in 1998.

### Production Program

TRW's production program in the Czech Republic is based on two product groups - switches and simple electronic modules. Both metal and plastic switches are made for a number of applications, including switches for brake lights, gearboxes, lighting control, and oil pressure. Switches are primarily produced with simple equipment and a high manual labor content.

Electronic module production includes modules for windscreen wipers, seat and screen heating, and interior lighting control.

### Customers

In 1997, TRW's biggest customer was **Ford** who accounted for 28% of TRW's

CZK 800 million in sales. Some 12% of sales went to **Skoda**, and 11% to **Audi**. Other customers include **Peugeot** (7%), **Opel** (7%), **VW** (4%), **Volvo** (4%), **Renault** (4%), **Citroen** (4%), and **Mercedes** (3%). A small amount of business is done with Czech truck-makers **Tatra** and **Skoda Liaz**.

TRW is ISO 9002 certified and has received customer quality evaluations from **Bosch**, **VW/Skoda/Audi**, **BMW**, and **Ford**.

### Localization Hampered by Quality Problems

"I estimate that about 95% of our purchases come from abroad and about 5% from the Czech Republic," Jiri Hocek, TRW's sales manager told the CEAR. "We want to increase this share but there are many problems — quality, in the first place." The company's purchases are also limited by the requirement that certain parts can only be purchased from TRW companies.

### R&D From Germany

The development of the design of switches and modules, and the design of the technology used for their production is handled in the laboratories of TRW's sister company **TRW Fahrzeuelektrik** in Radolfzell, Germany.

The technology department at the Czech plant is focused on operational testing of

switches, improving efficiency, supervising the technological standards of subcontractors, modifying technology for specific conditions, and handling customer complaints and comments.

### Transportation Smooth

Most of TRW's production in the Czech Republic is exported to sister companies in Germany, France, England, Italy, and Spain. These companies, in turn, sell directly to the OEMs.

TRW primarily uses truck transport for shipping its products, with a small share being moved by air. According to Hocek, the company has no problems moving goods through the Czech borders. "We have our own expedition firm which provides this service."

### Future Plans: Czech Republic Steady, Expansion Set for Russia

According to company sources, the Czech operation is at the limit of its growth and a turnover of CZK 1 billion is expected to remain constant in the future. Further growth is limited by both the physical plant and a growth strategy set by the mother company in Germany.

With production stable in the Czech Republic, **TRW Fahrzeuelektrik** is looking to a bigger prize — Russia. A new joint venture to produce switches for Russian carmaker **AvtoVAS** is currently being negotiated. "AvtoVAS will be our first big customer in Russia," said a source at TRW. The joint venture is expected to be completed this year ■

## Sales Loss Leaders in Poland (YTD February 1998)

Passenger Cars			Light Commercial Vehicles			Medium Commercial Vehicles			Change '98 v. '97 Units
Make	Units	Change '98 v. '97 Units	Make	Units	Change '98 v. '97 Units	Make	Units		
FSO - Polonez	2,933	-3774	Fiat Cinquecento Van	51	-683	FSC - Zuk	201	-244	
Fiat Cinquecento	7,020	-3112	FSO Polonez Truck	1,687	-464	Ford Transit	91	-73	
PF 126	6,576	-2457	Citroen C15	421	-219	Fiat Ducato	33	-47	
Toyota Carina E	368	-1518	GM - Opel Combo	111	-72	Nissan Vanette	1	-25	
Peugeot 406	491	-1517	Peugeot Partner	94	-66	Toyota Hiace	10	-13	
Fiat Uno	3,097	-1329	VW Caddy	43	-44	Renault Trafic	11	-2	
Renault Megane	1,698	-1326	FSO Polonez Cargo	28	-38	Mitsubishi L300	0	-1	
Daewoo Espero	417	-1170	Renault Express	11	-22				
Citroen AX	119	-1036	Ford Courier Van	33	-13				
Opel Vectra	800	-1017	Fiat Fiorino	0	-13				

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

# CEAR™ Extra Data For Email Edition

This Data did not fit in the Print Edition, but it is made available to Email Subscribers

## Best Selling Brands in Poland (YTD February 1998) Ranking By Retail Volume

### Passenger Cars

Make	Volume	Market Share
FIAT	29,038	34.39%
DAEWOO	23,053	27.30%
GM - OPEL	6,370	7.54%
SKODA	3,798	4.50%
RENAULT	3,355	3.97%
HONDA	3,074	3.64%
FORD	2,571	3.04%
TOYOTA	2,524	2.99%
VW	2,166	2.56%
SEAT	2,150	2.55%

### Commercial Vehicles

Make	Volume	Market Share
DAEWOO MTR.	2,057	26.99%
DAEWOO	1,715	22.50%
CITROEN	647	8.49%
MERCEDES	573	7.52%
FIAT	452	5.93%
SKODA	448	5.88%
VW	444	5.83%
FORD	288	3.78%
PEUGEOT	261	3.42%
IVECO	231	3.03%

Source: SAMAR, s.c.

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## Polish Vehicle Market Segmentation (YTD February 1998)

Segment	YTD SALES (Units)		CHANGE (%)	MARKET SHARE (%)		SALES IN FEBRUARY	
	1998	1997		1998	1997	1998	1997
1. Segment A	20,663	24,084	-14.20	24.47	28.25	10,309	13,031
2. Segment B	16,212	21,804	-25.65	19.20	25.58	7,822	12,189
3. Segment C	37,310	25,159	48.30	44.18	29.51	18,199	13,070
4. Segment C/D	8,662	12,926	-32.99	10.26	15.16	4,964	4,647
5. Segment D/E	926	373	148.26	1.10	0.44	732	268
6. Segment F	10	14	-28.57	0.01	0.02	7	11
7. Segment S	156	391	-60.10	0.18	0.46	96	225
8. Segment MPV	431	390	10.51	0.51	0.46	207	281
9. Segment 4WD	77	111	-30.63	0.09	0.13	37	74
<b>Total Passenger Cars</b>	<b>84,447</b>	<b>85,252</b>	<b>-0.94</b>	<b>100.00</b>	<b>100.00</b>	<b>42,373</b>	<b>43,796</b>
10. Light Comm. Segment	3,454	4,572	-24.45	45.32	55.02	1,935	2,398
11. Medium Comm. Segment	4,168	3,738	11.50	54.68	44.98	2,192	1,961
<b>Total Commercial Vehicles</b>	<b>7,622</b>	<b>8,310</b>	<b>-8.28</b>	<b>100.00</b>	<b>100.00</b>	<b>4,127</b>	<b>4,359</b>

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