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THURSDAY
MAY 16, 2002
PAGE 1 OF 4

VW VOWS TO REDUCE PRODUCT OVERLAP

Volkswagen AG aims to reduce product overlap between its various brands within 18 months, according to Bernd Pischetsrieder, its new CEO. Platform sharing, a strategy introduced by former CEO Ferdinand Piech, will continue throughout the company. But Pischetsrieder promises more brand differentiation, especially among the company's high-end Audi, Bentley, Lamborghini and Seat products.

Exactly how he will accomplish that goal isn't clear, and Pischetsrieder concedes much remains to be done. In March VW set up a senior management team to oversee all future product planning and reduce model-by-model competition among its brands. But earlier the company reorganized its brands into two groups—VW/Skoda/Bentley and Seat/Audi/Lamborghini—and said brands within each group would share as much as 50% of their components.

Pischetsrieder figures VW is only about halfway there in implementing the new strategy. Unlike Piech, Pischetsrieder is expected to emphasize profits over market share. VW is the top-selling automaker in Europe but has seen its share dip slightly in recent months. In the future the company plans to increase sales in the U.S., which now account for about 10% of its volume.

GM EXTENDS METHANE POWER PROGRAM

General Motors Corp.'s truck assembly plant in Ft. Wayne, Ind., began using methane gas generated by a nearby landfill this year. The plant, the third GM facility to adopt the practice, will derive 16% of its energy needs from methane, which will result in cost reductions of more than \$500,000 per year.

Under a partnership with Toro Energy and Serv-All, methane is collected from decaying garbage. To capture the gas, which would normally be burned off at the site, Serv-All installed wells and a collection system at its landfill. Toro then built an eight-mile pipeline to deliver the methane gas to the GM truck plant, which makes Chevrolet Silverado and GMC Sierra full-size pickup trucks.

The clean-burning methane is used as a replacement for natural gas in various appli-



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**THURSDAY
MAY 16, 2002**

PAGE 2 OF 4

cations. In powerhouse boilers, for example, GM says methane usage is as high as 70%. Toro had to modify the boiler system to burn the methane.

GM and Toro have combined on similar systems at the automaker's plants in Lake Orion, Mich., and Toledo, Ohio. The two companies also are evaluating other GM sites for possible implementation. The methane program is part of GM's 10-year initiative to cut energy consumption by 25% from 1995 levels. As of the end of last year, it says it had achieved a 17% reduction that saves \$140 million.

MORE ENGINEERS IN FEDERAL-MOGUL'S FUTURE

Despite continuing efforts to cut costs and divest non-core businesses, Federal-Mogul Corp. says it will add about 100 engineers per year for the foreseeable future, reports Bloomberg News. At its annual shareholders meeting yesterday, CEO Frank Macher said the company needs more engineers to help reduce product development time and find ways to lower production costs.

Bloomberg says the company currently has 2,500 engineers representing about 5% of its global workforce.

The Southfield, Mich.-based powertrain component supplier filed for Chapter 11 protection last year and now is working with creditors to develop a turnaround plan. As part of its strategy, the company has been selling off some of its business units. Earlier this week it signed a letter of intent to sell part of its U.S. camshaft operations to China's ASIMCO for \$25.7 million.

The proposed sale includes two plants in Michigan and one in Indiana that make machined cast iron and steel camshafts and have combined sales of \$80 million. The deal also includes Federal-Mogul's 80% share of an assembled camshaft joint venture with Nippon Piston Ring Co. Ltd. The sale doesn't involve another Michigan camshaft facility, which is geared toward the aftermarket, or its camshaft plants in Brazil, Mexico and the U.K. The proposed sale is subject to approval by the U.S. Bankruptcy Court in Wilmington, Del. A hearing on the deal is scheduled for next week.

NEW HIGH TORQUE ENGINE AIMS AT HYBRID MARKET

At 125 lbs., Advanced Engine Technologies Inc.'s prototype OX2 internal combustion engine weighs one-fourth that of a traditional powerplant and is about half the size. The curious engine employs a fixed cam, around which the pistons and inner block move.

The resulting design has one-third fewer moving parts than a conventional ICE—eliminating the crankshaft, oil pump and valvetrain—and boasts a high torque-to-rpm ratio. The OX2 engine also can run on a variety of fuels, including gasoline, diesel, natural gas, liquid



Driveline and Chassis Technology

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WHAT IS IT?

It's an electronically controlled transmission that reduces fuel consumption in wheel loaders, fork lifts, mobile cranes and railroad engines.

The ZF Ergopower Transmission

**THURSDAY
MAY 16, 2002**

PAGE 3 OF 4

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propane and methane. The current prototype can handle all fuels except diesel without modification. The product also has attracted the interest of legendary specialty builder Carroll Shelby, who has signed on as president of Los Angeles-based Advanced Engine.

The current OX2 produces less than 20 horsepower at 650 rpm, or about one-third that of existing comparable ICE units at idle. But it also generates an impressive 135 lb-ft of torque which, combined with its simple design, suggests the technology might find a home in electric hybrid vehicles. Developers say that will require a unit that can produce on the order of 60 hp at 1000 rpm.

Advanced engine has signed a letter of intent with General Motors Corp. to develop the system for hybrids. Near term, it is focusing on electrical generator applications and expects to roll out a 30 kW stationary unit in 18 months.

The OX2 prototype utilizes two pistons that fire simultaneously. Its valveless design allows four firings per four-stroke cycle, which help boost torque. Pistons are connected by rings that move via rollers along the fixed cam. The rings are in contact only with the bore, thus eliminating loading on the sides of the combustion chambers, the company says. Timing can be tailored to optimize combustion of the fuel being used regardless of engine rpm. This is due to an extended dwell at the top of the compression stroke. In traditional four-stroke engines combustion often occurs prior to the top of the stroke and results in a loss of energy.

The OX2 takes the air/fuel mixture to the combustion chamber via a single port. The unit also acts as an exhaust port, with heat transfer on intake, cooling the port and seal, while maximizing fuel vaporization. Exhaust gases recirculate into the combustion chamber on intake, aiding the fuel vaporization process.

GM AUTONOMY CONCEPT NAMED "ENGINE" OF THE YEAR

The fuel cell system for General Motors AUTonomy concept vehicle was named "Concept Engine of the Year" at this week's Engine Expo in Stuttgart, Germany.

Introduced earlier this year at the Detroit auto show, the AUTonomy was designed from the ground up to integrate fuel cell and drive-by-wire technologies. GM plans to have a running prototype of the vehicle by the end of the year. However, it says large-scale commercial applications still are about 10 years off.

The AUTonomy award marks the second straight year a GM power system has been named best concept engine by the international group. Last year its Saab unit took top honors with its SVC engine with variable compression.

CHRYSLER UPGRADES PRODUCTION PLANNING SYSTEM

DaimlerChrysler's Chrysler arm will begin pilot testing of a new Web-based production planning system later this month that it says will streamline order and supply inputs, cut inventories and speed the production process. Dubbed "integrated volume planning," the system is to be implemented companywide by mid-2003.

Chrysler says it currently updates production plans once a month. Under the new system this will happen at least once a week. Instead of processing information sequentially from dealers, suppliers and plants, the automaker will use the system to quickly compare dealer orders and manufacturing constraints to optimize the process

**THURSDAY
MAY 16, 2002**

PAGE 4 OF 4

and avoid costly unscheduled expedited deliveries.

Chrysler says the plan will not require any additional software or hardware investment at the plant, dealer or supplier level. The automaker will use systems already in place to gather information at five regional centers then will use software from Dallas-based i2 Technologies Inc. to develop new production plans. IBM will provide systems integration support.

The system will be phased in by product line, starting with SUVs, across multiple plants. It is designed to work in conjunction with other production tools, including just-in-time delivery systems. Chrysler wouldn't estimate time or cost savings, but earlier this year the automaker said it is targeting a 10% reduction in manufacturing costs. In addition to cutting costs, the new system is expected to help Chrysler react faster to changing market demand and improve forecast accuracy.

VAUXHALL TIAGRA ROADSTER TO BOW IN 2004

General Motors Corp.'s Vauxhall arm in the U.K. will launch its new Tiagra two-seater convertible in mid-2004, about the same time it ceases production of its sporty VX220, reports *Auto Express* magazine. Unlike the VX220, which is designed and built by Group Lotus, the Tiagra is being developed internally with Lotus contributing engineering support to enhance ride and handling characteristics.

The vehicle will ride on one of GM's existing small car platforms, the magazine says, which names the Opel Corsa and Agila underbodies as likely candidates. Initially the Tiagra will include a front-engine design, but a mid-engine version may be added later. The car will be available with modified versions of current four-cylinder engines, including 1.4-, 1.6- and 2.0-liter powerplants starting at 90 horsepower. *Auto Express* says the two smaller engines will include twin port variable intake controls and that a diesel engine may be offered too.

A spartan interior and manually folding soft top will help keep costs down for the vehicle, expected to be base-priced as low as \$10,000. Exterior styling is reminiscent of the 1994 Tiagra but with added pizzazz, including styling cues from last year's Frogster concept car, to help the automaker shake its staid image and attract younger buyers.

DURA AUTOMOTIVE DIVESTS STEERING GEAR BUSINESS

Dura Automotive Systems Inc. is selling its U.K.-based steering gear business to the plant's managers. The facility had sales of \$20 million last year to Ford's Land Rover arm, which Dura says is one of the few automakers still using unpowered steering gears. Last year the business broke even, but sales are forecast to drop to \$13 million as Land Rover phases in power steering units on some of its vehicles.

Dura, based in Rochester Hills, Mich., will take a charge of \$22 million as a result of the non-cash transaction. The new owners, who plan to target off-highway applications in the future, will assume an unspecified debt load.

Dura is in the process of divesting non-core business. Earlier this year, the company sold its plastics operations and is said to be shopping its powertrain component business too. Instead it will concentrate on braking and seating systems. Last year the company had sales of \$2.48 billion.