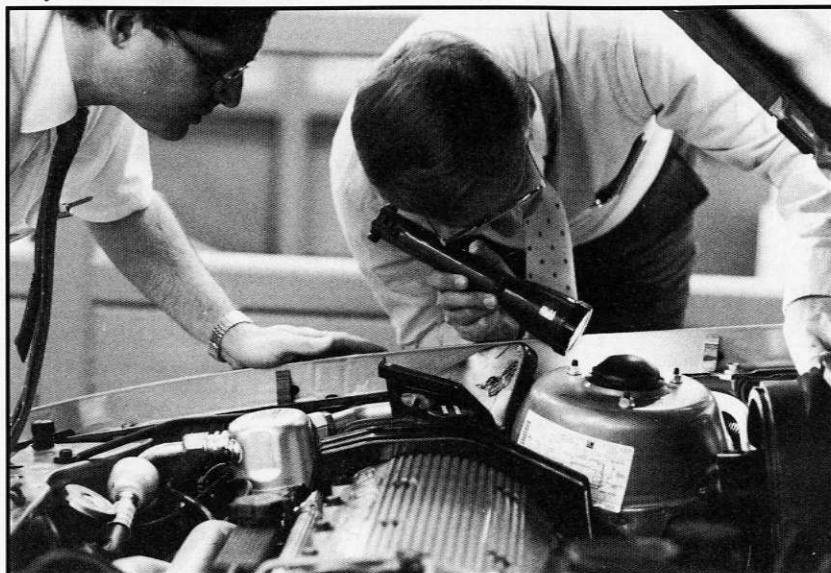


CABLEGRAM
PACKARD ELECTRIC





All in a day's work

Terry Jones, the electrical coordinator at the B-O-C Assembly Plant in Lansing, Mich., (left) and Packard Cooperative Involvement Engineer (CIE) Bob Leonard check for leaks beneath the hood of an Oldsmobile Cutlass Calais. As one of the division's 32 CIEs, Leonard's job is to be a liaison between Packard and customer assembly plants. See story on pages 6 & 7.



On the cover: Abigail Tomajko, Dept. 1766, makes sure terminated leads from her area meet her customers' requirements.

Photo: Richard Clapp Photographic, Inc.

The racer's edge

Pages 4-5

Members of the Penske Racing Team used Packard products to give Rick Mears the boost he needed to win the 1988 Indianapolis 500 Mile Race. Chevrolet and Buick engines dominated this year's classic — with a little help from their friends at Packard.



All systems 'go'

Pages 8-9

Circuit Protection Testing insures that Packard electrical components will perform the way they were designed and will interact properly with other systems in GM vehicles. The computer-controlled testing system adds value to the division's products.



Packard Electric Cablegram

Published for employees and retirees of Packard Electric Division of General Motors, P.O. Box 431 Warren, Ohio 44486
An equal opportunity employer
Vol. 50, No. 2 May/June 1988

Keeping customers satisfied

Pages 10-11

Joe Boyle and his co-workers in the Customer Service Department are using innovative methods and computer technology to insure Packard's customers get what they ordered: on time, in the correct quantity, and by the specified delivery mode. With over 1,200 customers and nearly 2,500 shipping destinations, it's no small task.



Getting back to basics

Page 16

Operator Prentiss Johnson reads the information on the screen of a computer-controlled extrusion machine as he shuts down after a run. Because of his enrollment in Packard-Clinton's Basic Skills Improvement program, he better understands the demands of his job.



Ryndee S. Carney, editor
Patricia M. Reilly, contributing editor
Danny Greene, Mississippi writer
Patricia K. Hawkins, executive editor
Telephone: (216) 373-2684
GM Network: 8-531-2684

Reward: Recognition & Security

The sixth absolute of *Excellence*

Olympic gold medals, blue ribbons from the state fair and engraved plaques are all ways we recognize people for outstanding achievements.

Rewarding people for a job well done — the sixth absolute of Excellence — is an important, but often underestimated, part of running a successful business.

All too often we recognize the negative aspects of our business and we don't spend enough time crediting the positive. Bad employees get a lot of our attention; good employees don't get the attention they should. We know how to react when a person fails, but we don't always know what to do when a person succeeds.

Part of the problem stems from the fact that we often don't define job re-

quirements precisely enough to recognize people when they exceed them. Some things — zero defects, for example — are easy to measure. People are more difficult.

A reward doesn't always have to be something tangible, such as a trophy or a pay raise. People like feedback. Recognition can be as simple as a pat on the back and an "attaboy" or "attagirl" from an appreciative supervisor.

All of us have a sense of pride in what we do and we enjoy being recognized for our efforts. We also want to be on a winning team; I haven't met many people who want to be on a merely average team.

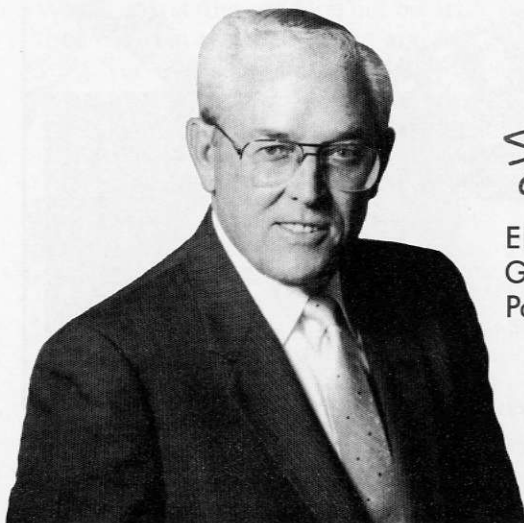
We don't want to have just an average team at Packard; we're aiming to be the best. Average companies aren't going to survive in the global marketplace. To be the best, everyone on our team must pull together. As individuals we can't attain our divisional

objectives, but as a team we're tough.

Rewarding outstanding achievements is a valuable team-building tool. Through Excellence, we're driving to motivate people to do their best, then recognizing them for being better than average.

But there is another side to the sixth absolute: job security. It's the bottom line of Excellence. If we don't exceed our customers' expectations we eventually won't have jobs.

However, this absolute has a dimension beyond job security: opportunity. As Excellence becomes more deeply ingrained in Packard's culture we won't have to worry that our business will shrink — our business will grow. With growth comes opportunity and even greater job security, the ultimate reward.



ELMER E. REESE
General Manager
Packard Electric Division

Packard Electric connectors and cable power Rick Mears into Victory Lane at the 1988 Indianapolis 500

In Indianapolis, the first of May signals the beginning of Indy 500 fever. This race is rich in history, prestige and tradition.

Packard Electric and General Motors are becoming part of this tradition as GM engines with Packard products set the pace for the rest of the field for the second straight year.

Pole sitter Rick Mears won his third Indy championship. His electric-yellow machine, which featured a Chevrolet-Ilmor V8 racing engine and Packard Weather-Pack/Metri-Pack connectors and ignition cable, didn't let him down. Mears was the speed king throughout the month, routinely swooshing around the brickyard at 220 mph during practice and qualifications.

Chevrolet and Buick engines dominated the field this year. The top five qualifiers — Mears, Danny Sullivan, Al Unser, Sr., Mario Andretti and Al Unser, Jr. — piloted cars driven by Chevy V8 engines. The entire first row, which was

the fastest in race history with an average speed of 216.894 mph, consisted of Penske cars. Each used the Chevy Penske PC17 engine and Packard Electric products.

There were six Chevrolet V8s and three stock-block Buick V6 engines among the 33 cars starting the race. Packard supplied the Buick cars with cable and connectors for complete engine and chassis wiring.

Just 15 cars — including four Chevy V8s and one Buick V6 — were running by the time Rick Mears took the checkered flag. Chevrolet-powered cars finished one-two-three, as Emerson Fittipaldi and Al Unser, Sr., rounded out the top three spots. Buick had its most successful race ever, with driver Jim Crawford finishing in sixth place.

Going the distance

Reliability and endurance are more critical than speed alone in winning at Indy. "The Chevrolet-Ilmor V8 engine is the most complex engine out there to-

day," said Bob Applegate, a Chevrolet project engineer and the liaison between Chevrolet Special Products, the race teams and Ilmor Engineering, Ltd., of Brixworth, England. "Paying attention to all of the little details is what it takes to win. One of these details is the use of Packard Electric parts.

"The tiniest little thing can shut you down," Applegate continued. "Twenty or thirty people work on a race car. The driver is the last cog in the wheel. All of the GM people involved with this project should feel proud, because without teamwork we wouldn't be in the winner's circle."

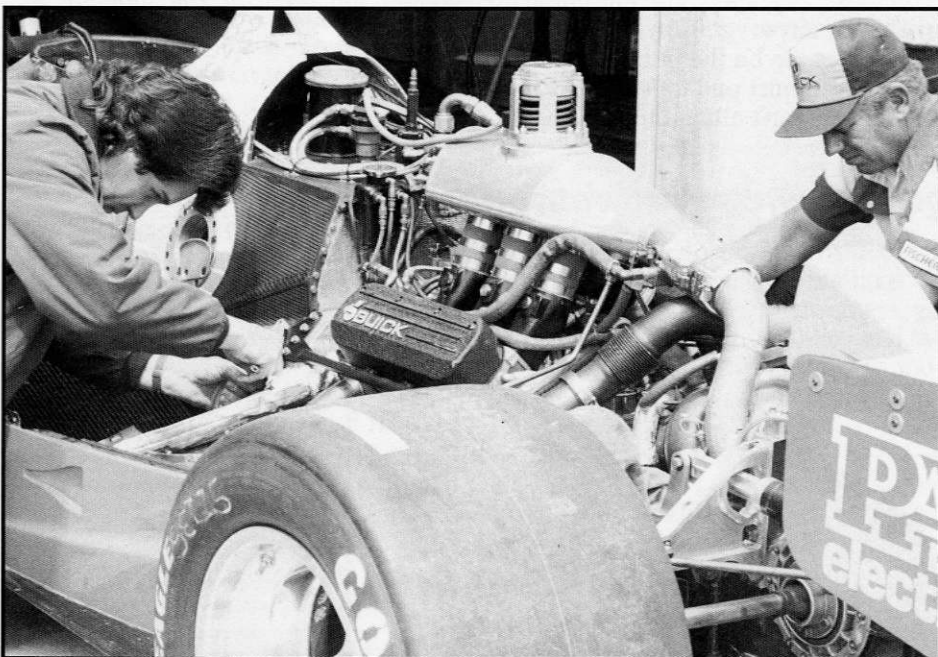
Buick's Special Products team is another satisfied Packard customer. "We've been using Packard Electric products for years with good results," said Dave Decker, a Special Products team member.

Dave Christner, a Packard Electric application engineer and Special Products support team member, said that Packard directly supported Buick's Indy program for four years and indirectly supported the Chevy program for one year. The division became much more involved with Chevrolet's racing team in 1988.

"We were in our infancy last year, especially with the Chevy engines. In 1987, (Roger) Penske came to us and asked for our products — we didn't deal directly with Chevrolet. This year our involvement expanded ten-fold. We are now working directly with Chevrolet and are involved in design work with Ilmor Engineering. We've become part of the family."

World-class leader

Racing applications allow Packard, Chevrolet, and Buick to test their products under extreme conditions. "We have gained knowledge about our products through our motorsports involvement," Christner said. "We have proven our components can successfully withstand the rigors of the Indianapolis 500 and other races.



Buick Special Products team members fine-tune a stock-block Buick V6 engine prior to a practice run at the Indianapolis Motor Speedway. Packard supplied the Buick cars with cable and connectors for complete engine and chassis wiring.

"Our support of racing programs illustrates our commitment to our customers and enhances our image as a world-class leader in power and signal distribution," Christner added.

Applegate said GM's racing programs promote innovations which can be used in regular production vehicles. "Racing pushes technology ahead. This technology can then be downloaded from racing applications into regular production. I see more and more production people at C-P-C asking racing Special Products teams for input as they design vehicles for the consumer market.

"Another benefit from racing is it improves our ability to respond quickly. We know immediately if we succeeded or failed," he noted. "In racing, every week is a new model year."

—RSC



Bob Applegate, a Chevrolet Special Products engineer, shows off a Chevrolet-Ilmor V8 engine similar to the one that propelled Rick Mears into Victory Lane at Indianapolis.

photo: Carney

Yeager on GM: 'I like to look at a winner!'

Legendary World War II hero, test pilot and 1988 Indy pace car driver Chuck Yeager is keenly aware of how important having equipment with "the right stuff" is to any successful mission.

Yeager, who volunteered to pilot the pace car again after driving it in 1986, believes General Motors and Packard Electric have earned his loyalty and support. Born and raised in Lincoln County, W. Va., the 65-year-old retired Air Force general said his family always bought GM products.

During an interview with the **Cablegram**, Yeager said, "I can never remember my dad driving anything except General Motors trucks and cars. That's just the way he was — loyal to anything he liked — and I was raised that way too."

GM products have changed dramatically since the days when Yeager's father worked the West Virginian natural gas fields. Today's vehicles are loaded with electronic devices which make the vehicles more convenient, reliable and safe.

Reliability is a life and death matter to someone like Yeager, the man who shot down 13 enemy fighters over Europe and was the first to "go supersonic," breaking the sound barrier in 1947. His survival depended on the people who designed and built his equipment doing their jobs right the first time, every time.

"The new technology, especially computer technology, has made it so much easier for fighter pilots like myself to do our job in an airplane. We're more effective today than we were just three or four years ago because of new technology."

Advanced testing systems which were first used in aircraft are now used to improve the reliability of GM cars and trucks. Yeager said the 1988 Oldsmobile Cutlass Supreme, the Indianapolis 500 pace car, is a prime example of this.

"Because the testing equipment is so good, the people who make wiring harnesses and other electronic devices can test (the product) out before they put it in the automobile and it's very, very reliable. Plus, it's fun to

drive the Oldsmobile pace car because there's some new innovations in the car that are fun to play with."

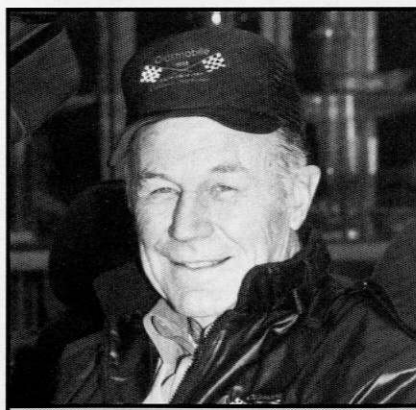
Yeager particularly enjoyed the pace car's head-up display, a device that projected the speedometer onto the window so he didn't have to take his eye off the Speedway track. He said head-up displays have been used in fighter planes for 20 years, but are just now appearing in passenger cars.

Competition and higher customer expectations are pushing GM and Packard to continually improve their products, Yeager said. "We got sort of complacent in the past because of the lack of competition. Then the Japanese kind of held our feet to the fire, but General Motors is responding very well to this challenge."

Speaking as a Packard Electric and General Motors customer, Yeager said GM products today are beginning to exceed his expectations.

"This product (the Cutlass Supreme) is a result of technology. And like the housewife today who takes microwave ovens and Teflon skillets for granted, consumers expect advanced technology, reliability and convenience in their vehicles. General Motors is really beginning to put out quality products, and it makes me feel good. I've looked at GM products all of my life and I like to look at a winner!"

—RSC



General Chuck Yeager piloted the 1988 Indy 500 pace car, an Oldsmobile Cutlass Supreme.

photo: Courtesy Oldsmobile Div.

Cooperative Involvement Engineers strengthen the division's ties to customer assembly plants

If any Buick-Oldsmobile-Cadillac (B-O-C) employee at the Lansing Assembly Plant is having a problem with the Packard products he or she uses to build cars, the chances are good that Bob Leonard knows about it.

One of Packard's 32 Cooperative Involvement Engineers (CIEs), Leonard spends most of his time on-site at his assigned customer's facility. He acts as an antenna, receiving direct customer feedback and transmitting this information to the appropriate people throughout the Packard organization.

Leonard also becomes actively involved in problem solving. It isn't unusual to find him probing under the hood of a Cutlass Calais as it moves down the line, or dissecting a Grand Am tail lamp assembly to find the root cause of a loose connection.

"Satisfying our customer is a CIE's job. I keep the lines of communication open between Packard and Lansing," said Leonard. "I travel up there and spend several days every week — or at least every other week — tracking and

solving quality problems and addressing customer concerns."

A typical day

Leonard normally arrives at the sprawling Lansing assembly complex around 7 a.m. Lansing employees produce about 2,000 N-cars — Buick Skylarks, Oldsmobile Cutlass Calais and Pontiac Grand Ams — daily. He immediately touches base with the Lansing electrical coordinator, Terry Jones, to determine the day's schedule.

Leonard attends plant audit meetings during which Lansing employees discuss the quality of cars built the previous day. He spends most of his time in Lansing on the assembly line, working with production supervisors, hourly employees and reliability personnel addressing quality concerns. When Leonard returns to Packard, he reviews these concerns with divisional application engineers, the sales department and manufacturing personnel.

"I enjoy working on problems and getting them solved in a timely manner," said Leonard. "It's also interesting

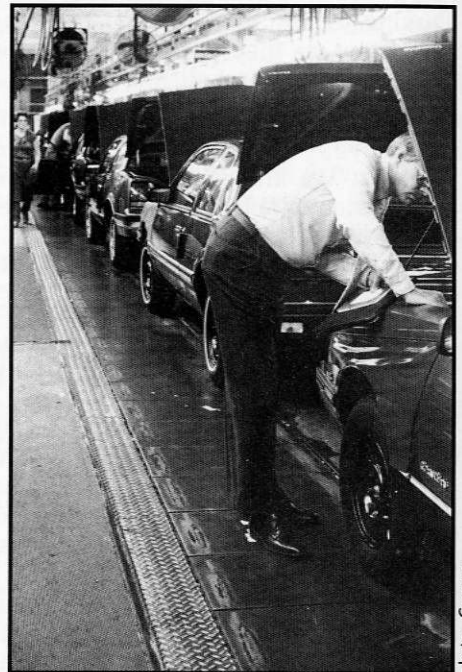


photo: Carney

Bob Leonard examines the wiring harness routings on an Oldsmobile Cutlass Calais as it moves down the line at the B-O-C Lansing Assembly Plant.

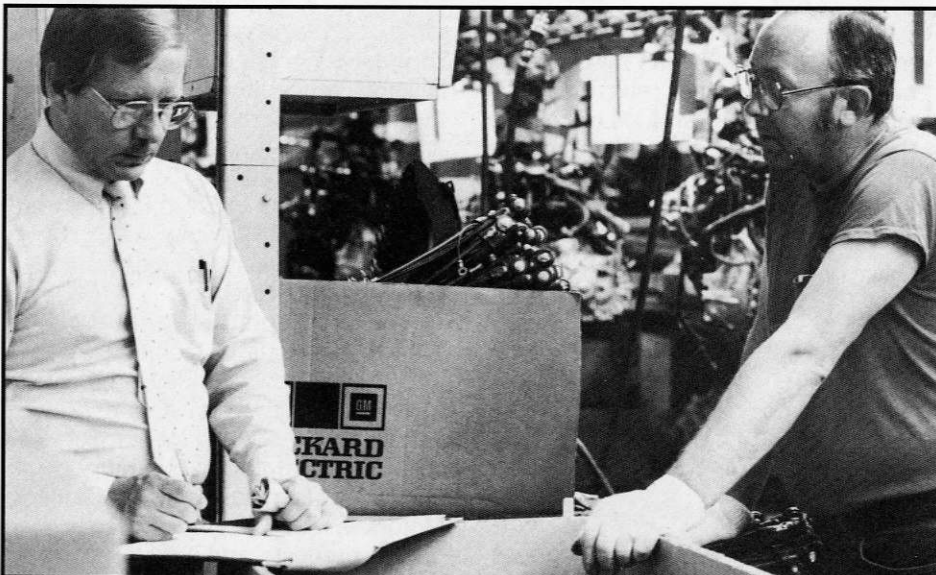


photo: Carney

Cooperative Involvement Engineer (CIE) Bob Leonard (left) records customer feedback from Wendel DeLo, a repairman at the Buick-Oldsmobile-Cadillac (B-O-C) Lansing Assembly Plant. Leonard will follow up on any problems DeLo has experienced with Packard products when he returns to divisional headquarters.

to talk to workers on the line who use our products and find ways to make their jobs easier."

What do customers like?

Because Leonard interfaces directly with B-O-C Lansing, he knows what his customers like and dislike about Packard products.

"Chronic problems are what drive our customers crazy — things that happen over and over again," Leonard describes one nagging problem that Packard and B-O-C Lansing worked together on to improve.

"Lansing and Packard spearheaded action on a situation we had with wedge-based bulbs and glovebox courtesy light sockets. Through a team effort, we reduced this defect by over 50 percent."

Sometimes a small change is all it takes to make the customer happy. "Often, all they want is a packaging or

material handling change that is simple for us to do," Leonard stated. "These small changes all add up to greater customer satisfaction."

One of Leonard's major projects in 1987 was the material respect program, Packard's effort to show customers the best way to handle and install the division's products on vehicles. "The CIEs conducted material respect seminars at various customer locations. A number of plants made drastic improvements as a result."

Raising awareness

Leonard also arranges visits by Packard and B-O-C employees to each other's facilities. "Hosting these visits is a rewarding experience," Leonard noted. "It raises the awareness of both Packard and B-O-C people. Sometimes our customers don't realize what build-

ing wiring harnesses involves, just as our employees sometimes don't realize what assembling a car entails."

Cooperative Involvement Engineers also coordinate customer input to the Internal Customer Satisfaction Survey (ICSS), General Motors' rating system for internal suppliers such as Packard Electric.

"Our customers obviously have seen a lot of improvement in terms of quality," said Leonard. "Packard's ICSS rating for the 1987 model year reflects this. We ranked fourth among 23 GM divisions, and our overall rating improved 11 percent from '86."

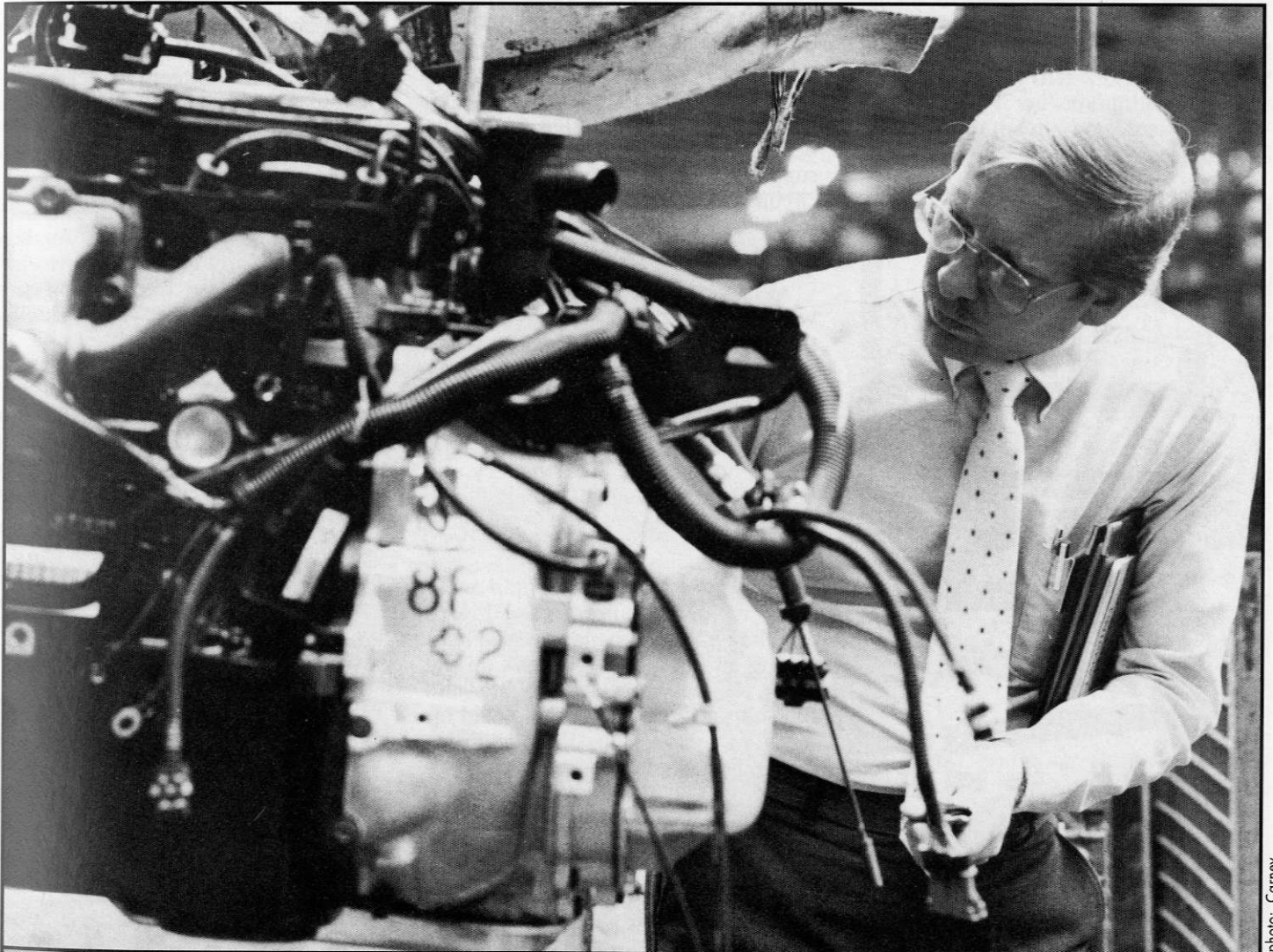
Customers rely on Packard's CIEs as they push for world-class quality. "The CIE program is becoming very productive," said Terry Jones, the electrical coordinator at Lansing. "It gives the

assembly plants instant communication with our suppliers, which is vital.

"The way we used to communicate was almost totally ineffective," Jones continued. "In the past, quality problem levels had to be at one or two percent of production before we acted on them. Now, if we have a single defect, it's a problem. Packard's CIE program wasn't the first in the corporation, but I think it's the best."

"Listening to our customers and responding to their needs in a timely manner strengthens our long-term relationships with them and safeguards job security for all of us," Leonard noted. "The CIE program illustrates how individuals at Packard can make the difference between a dissatisfied or a satisfied customer."

—RSC



Leonard checks the distributor coil connections on a four-cylinder Pontiac L-68 engine harness in the engine plant at the B-O-C assembly complex in Lansing, Mich.

CABLEFOCUS

Circuit Protection technology adds value to Packard products

Just your luck:

- You are driving down the highway when suddenly, an innocent-seeming cloud turns into a thundershower. Blinded by torrents of rain, you press the button that turns on your windshield wipers — at least it used to. Luckily, you are near a service station, so you stop and ask the mechanic on duty to look under the hood. He informs you a fuse which is supposed to “blow” when an electrical circuit becomes overloaded has failed to do its job. As a result, you may face a costly repair bill.

- You have returned from a two-week vacation in Hawaii. Tanned but tired, you collect your luggage at the airport baggage claim area and trudge to your car in the long-term parking lot. You pile into the car, anxious to get home, and insert your key in the ignition — no response. Your battery and rigor mortis have a lot in common.

- It's 5:05 on a sweltering Friday afternoon in July, and you've had “one of those days” at work. You limp out to your car and collapse in the driver's seat. In a hurry to cool down, you blast on the air conditioning, crank up the radio, plug in the cigarette lighter and shift into gear. Suddenly, the cold air stops. Forced to make the drive home with no relief from the heat, you suspect a blown fuse or tripped circuit breaker.

Packard Electric Division has developed a computer-controlled testing system to prevent situations such as these from occurring in General Motors vehicles.

Circuit Protection Testing verifies

that electrical components are functionally compatible; they perform the way they were designed and interact properly with other systems in the vehicle.

According to Kin P. Moy, staff development engineer, Advanced Engineering, and technical team leader for the System Compatibility Group, Packard is the first GM division to develop this kind of comprehensive testing capability.

Moy said engineers from Packard's Advanced Engineering and Application Engineering groups have worked together to devise Circuit Protection Testing in conjunction with Cadillac Division since 1985. “In the past, GM car divisions alone were responsible for Circuit Protection Testing. Their methods weren't computer-based and were less extensive than Packard's. Our technology takes testing a step further by actually adding value to the car.

“Our Circuit Protection Testing capabilities enable Packard Electric to be involved in electrical systems validation. It gives us a competitive edge and is another example of how we add value to our products. This is attractive to our customers,” observed Moy.

“The main role of Packard's Advanced Engineering group was to develop methods and procedures founded on computer-based data acquisition and processing,” explained Jack G. Olin, Advanced Engineering director. “The intent was to make this part of the division's standard validation testing.”

Circuit Protection Testing is more than just a verification tool, Moy

stated. Information gained from the computer-controlled tests is used to prevent future problems and predict how Packard components will perform in cars which aren't yet in production.

"Packard engineers use this information to verify the proper selection of cable, fuses and other materials they will use in the design of the signal and power distribution systems," Moy explained.

He added the procedure helps prevent future functional electrical problems because it simulates the conditions in which Packard components and wiring harnesses will operate. "We are currently designing

products for 1990, '91 and beyond. We can now predict how Packard products are going to perform in cars before they go into production. This enables us to be more proactive in exceeding our customers' expectations and continuously improving our products."

The program also provides data used to describe existing problems recommend solutions to the problems, and implement these solutions.

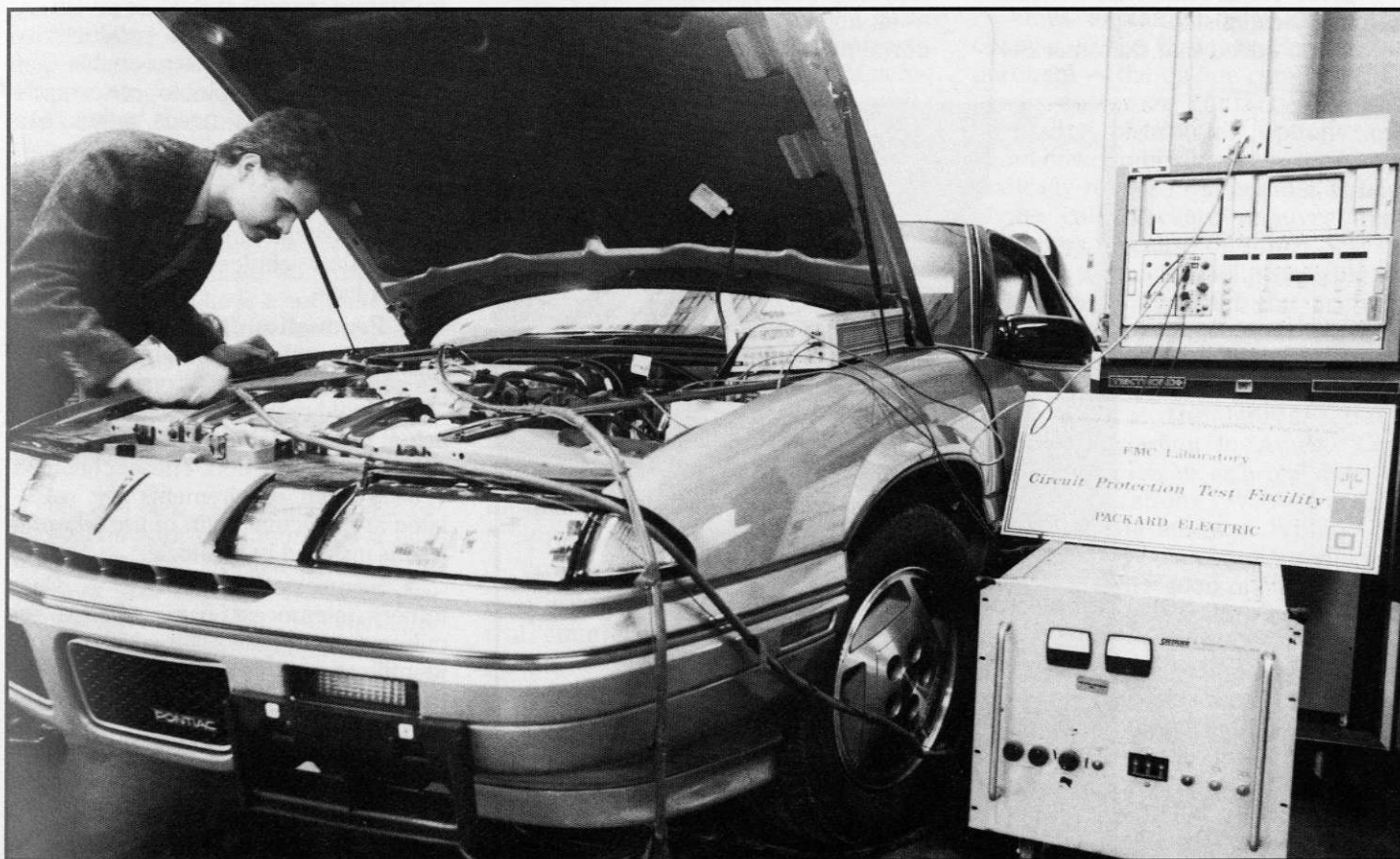
"Circuit Protection Testing generates enough information for us to formulate alternative solutions to problems. We have the luxury of testing each of these solutions and selecting the best one before our products

are used in vehicle production. This is much more cost effective for our customers," Moy said.

Moy said the program will expand in the future. "Our main effort in Advanced Engineering is going to be in systems prediction and the identification of parameters — are we measuring the right thing — and determining how we can best use this large data base to help design our products — what's the data telling us?

"This technology is an added unique service that we can offer to our customers. It will strengthen Packard's position in the marketplace."

—RSC



Jeff Sykes performs a Circuit Protection Test on a 1988 Pontiac Grand Prix to make sure Packard electrical components are functionally compatible.

Satisfaction guaranteed

Packard's Customer Service organization juggles the material handling needs of more than 1,200 customers

Keeping the customer satisfied: it's what retains old customers and attracts new ones.

Satisfaction for over 1,200 customers with nearly 2,500 shipping destinations depends on the ability of the Packard Customer Service Department to assure the customer gets precisely what is ordered on time, in the correct quantity and by the specified delivery mode.

According to Andy Razzano, administrator, Customer Service, Packard's Customer Service group allocates material to

- 37 General Motors assembly plants
- 70 GM accessory, or component, plants
- 2,100 North American non-allied customer locations

Razzano added that Customer Serv-

ice allocates material to 110 international customers located in 26 different countries.

The 'neck of the funnel'

"Customer Service serves as the focal point of Packard's communications with and distribution of finished goods to our customers," Razzano said. "We're the neck of the logistics funnel."

Customer Service personnel interface with almost every branch of the Packard organization as they allocate finished goods to the division's customers. In turn, Customer Service represents "the voice of the customer" within Packard Electric.

Razzano explained that because Customer Service personnel receive so much direct feedback from customers, they help define customer expectations — an important part of the Excellence concept. "We represent Packard

Electric to the customer and the customer to Packard Electric."

Meeting customer needs

Packard's customers have different needs, and they expect ever-faster responses to these needs.

Today's streamlined Customer Service Department is more flexible and responsive to customer requirements. The department moved into the new Distribution Center at North River Road in January 1987. At the same time, Packard merged the non-GM and international Customer Service functions with the Allied Customer Service operations to improve systems efficiency.

On-line "live" computer systems have replaced the cumbersome and frustrating manual system of inventory tickets. Efficiency and productivity gains with the new system enable Customer Service people to concentrate more on customers' needs, rather than reacting to customers' problems.

Customer Service now offers customers a variety of material handling options. Razzano described three of the distribution choices Packard's customers have

• Production Point of Use (PPU)

— GM assembly plants transmit daily to Packard Electric 10 days' worth of "firm" build requirements calculated on actual orders that are released in their system for production. These scheduled vehicle build requirements are calculated at the actual point of use where a part is installed in a vehicle.

• Sequence Shipping — Customers teleprocess harness build requirements daily to Packard in Vehicle Identification Number (VIN) sequence. Packard builds and ships the wiring harnesses to the customer in the exact order in which the assembly plant will use them.

• 'Milk Runs' — Packard ships material to the customer more frequently and in lot sizes specified by the customer. The customer contracts a designated freight carrier to pick up material shipments at a specified time period —

photo: Carney



Janet Whitby, an account planner who handles the AC Spark Plug and Delco Electronics accounts, expedites material to her customers with the help of an on-line "live" computer system.

"window time" — at Packard Electric and other supplier locations in the same area.

Measurable results

Hilda Folmar, a general supervisor responsible for GM component division and non-GM and international accounts, said the increased focus on customer satisfaction has improved Packard's performance in key areas.

She noted that during the past year Packard's delivery load reliability, which measures on-time shipments to non-GM and international customers, improved to 99 percent, and remains near that level. Customer Service personnel have funneled customer feedback to other segments of Packard and helped develop options such as shrink wrap, sorting material by part number, and putting customer-requested information on Packard shipping containers.

"When many functions were performed manually, we had very little time to be proactive to customers' needs. Today, we have a computer system that allows us more time to match customers' needs with our inventory and production. Customer Service's quality of work life has greatly improved, and our customers are happier."

Folmar's area established closer relationships with customers via a customer contact program. Account planners sent personal notes to customers inviting them to visit the Warren Distribution Center. Folmar reported she received positive feedback from customers regarding this program.

The ultimate customer

Packard's service parts activity is a segment of the Customer Service operations that focuses on GM vehicle owners — the "ultimate" customers.

Nelson Marshall, general supervisor for service parts operations accounts,



Account Coordinator Nancy Dabney interfaces with people throughout Packard Electric as she allocates finished goods to her customer, the General Motors Truck & Bus Group.

photo: Carney

noted the strategic importance of taking care of consumers. "It's as simple as this: if consumers cannot get their vehicles repaired due to service parts availability, they may not buy GM vehicles in the future. Service parts availability is a key competitive strategy for General Motors."

In October, General Motors Service Parts Operations asked all suppliers to improve their service parts delivery performance. "This past February," Nelson stated, "Packard Electric Division had exceeded our customer's expectations by being the first Automotive Components Group division to meet the challenge of 'zero' service parts misses. This is no easy task, considering a base of 20,000 past model year service part numbers."

Eliminating the middle man

Account planners at Packard now deal directly with their material control counterparts at GM assembly plants. In the past, Customer Service personnel had to work through GM's Central Office in Detroit when resolving material handling issues.

"This change has really increased our productivity and enhanced our response time to customer requests," observed Rick Ames, a general supervisor responsible for the Chevrolet-Pontiac-Canada (C-P-C), Buick-Oldsmobile-Cadillac (B-O-C), GM

Truck & Bus and GM engine plant accounts.

Ames explained how all of the changes in the Customer Service Department — the on-line computer network, customer contact program, innovative distribution options and pared-down procedures — have dramatically reduced the number of telephone calls Packard receives from customers. Because Customer Service now has so much readily-available information, Ames said the account planners can alert customers to potential problems ahead of time. "They don't call us anymore; we call them!"

Customers themselves have changed, according to Ames. "Customers now view us as a real asset to their organizations. We've become partners in the business. Within GM, there seems to be a conscious effort to look out for the good of the corporation as a whole. We are realizing that we're all in this together."

Customer satisfaction is a moving target. As customers receive improved service, their expectations also rise. "We have plans to make Customer Service even more productive and responsive in the 1990s," Ames said. "We have to anticipate what our customers are going to need in the future and be able to exceed their expectations. Our livelihood at Packard depends on keeping our customers happy." — RSC

Thinking globally

Multi-National Strategic Business Unit will coordinate Packard's strategy of worldwide growth for the 1990s

Grow or die.

That was the message General Manager Elmer Reese sent at last month's management conference, as he explained how Packard Electric's new Multi-National Strategic Business Unit (SBU) will help the division achieve its growth objectives.

Reese said if Packard's business does not expand, Yazaki, the division's major competitor, will replace Packard as the number one producer of power and signal distribution systems in the world by the early 1990s.

"If we don't continue to grow as a business, then we will die.

"We must grow to remain competitive in the industry. To do this, we have to focus on our non-GM business and we have to think globally," he stated.

Packard's Multi-National SBU will be

the linchpin of Packard's growth strategy. It will be responsible for further developing Packard's non-GM business worldwide — except in the European area — and for expanding the division's total business outside North America and Europe.

Specifically, the new Multi-National SBU will assume responsibility for Packard's business interests at New United Motor Manufacturing, Inc. (NUMMI), Canadian Automotive Manufacturing Industries (CAMI), Saturn Corporation, Shin Sung Packard in Korea, Promotora in Mexico and a joint venture in Brazil. Packard's European Operations will continue to function as an independent SBU.

Jack Williams, formerly director of Mexico East Operations, heads the recently-formed SBU. Williams and the Multi-National SBU report to Bob McCabe, divisional comptroller. Jim Walker is responsible for the SBU's manufacturing operations, and Dale Pilger directs the sales and engineering activities. Bick Lesser continues as joint representative director of Shin Sung Packard, Chuck Cunningham remains managing director of Packard Electric Do Brasil, and Bob Morlan continues to oversee the technology exchange be-



photo: Reilly

tween Packard and Promotora, the division's joint venture with Condumex in Mexico.

A break from tradition

Reese, McCabe and Williams each stressed that the Multi-National SBU represents a radical departure from "business as usual."

"Why does this SBU report to our divisional comptroller? For these reasons: we need to develop a specific performance measurement system, we need to keep it separate from our GM business, and since this business is non-traditional, it should be handled differently," Reese said. "My direction to the Multi-National SBU is to think globally, to manage the business differently from our North American Operations, and to take a totally new approach to the business."

'We need tremendous growth in non-GM business to stay ahead of our competition. We will fall to the number two position if we don't act now. This is not the kind of future that we can accept.'

—Robert L. McCabe



photo: Reilly

'We must look for new sources of growth for the 1990s, for new customers, for new markets, for new partners to help us grow in order to maintain our leadership position through the next decade, and to stay king of the mountain as we enter the 21st century.'

—Jack L. Williams

Strategy for growth

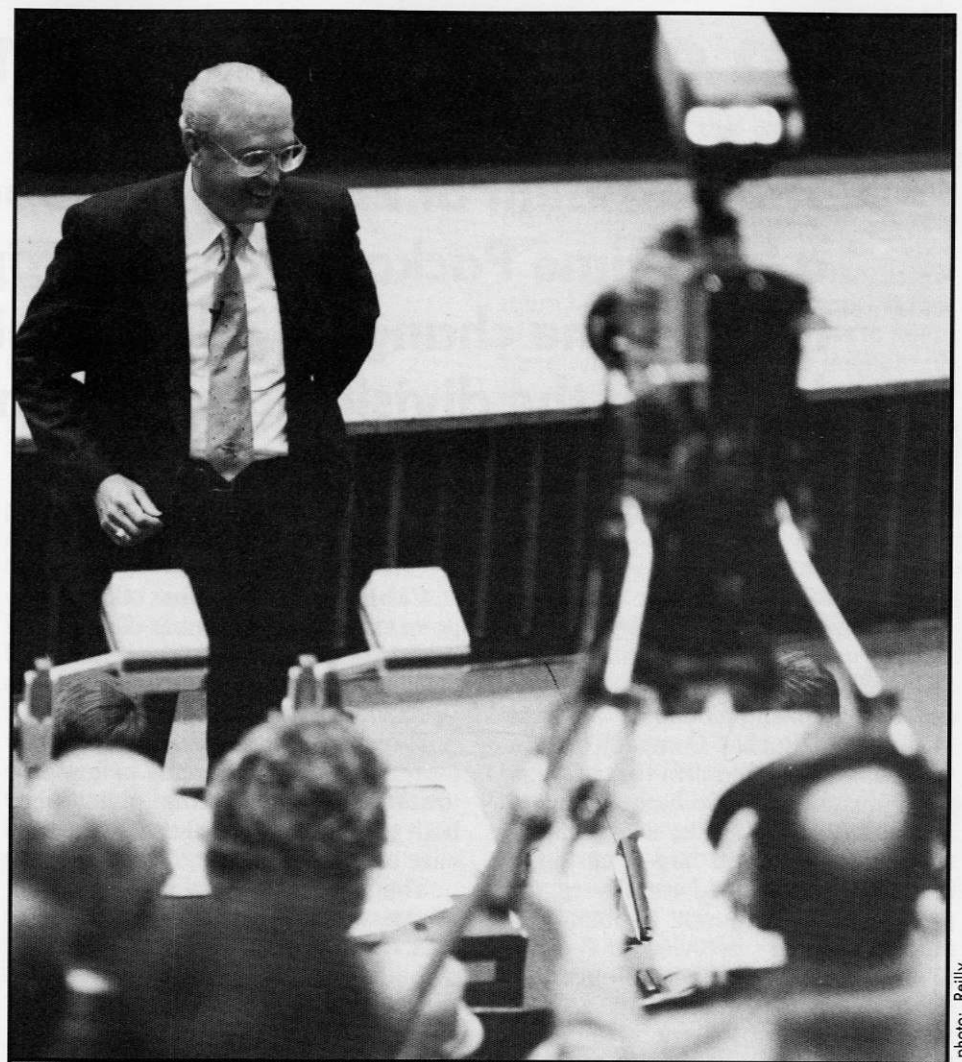
McCabe said Packard must double its non-GM business by 1993 in order to stay ahead of Yazaki, because there will be little opportunity for growth in Packard's GM business segment through the next decade.

"This kind of growth far surpasses that of the rest of the division, and our plan is very aggressive. It is going to require the support and commitment of all of us to make it happen," he stated.

"To stay on top — and to survive — we have to grow," Williams said. "The market for power and signal distribution systems is growing. The number of automotive Original Equipment Manufacturers (OEMs) competing in our traditional market is growing. The electrical content in their vehicles is growing, and our competition is growing. If we don't grow at least as fast as everyone else, our leadership position will continue to erode and we'll be lost!"

"We must look for new sources of growth for the 1990s, for new customers, for new markets, for new partners to help us grow in order to maintain our leadership position through the next decade, and to stay king of the mountain as we enter the twenty-first century."

The Multi-National SBU will act as the worldwide "eyes and ears" of Packard Electric, according to



General Manager Elmer E. Reese chats with members of the audience at last month's management conference. Reese discussed Packard's strategies for global growth and the role the newly-formed Multi-National SBU will play in reaching the division's goals.

photo: Reilly

Williams. "This SBU will identify growth opportunities and then take advantage of those opportunities for the division by teaming and working through Packard's global network."

Williams cited reasons why he believes Packard can achieve its growth objectives and remain on top:

- "We are today the largest supplier of power and signal distribution systems in the world. Our size should be an advantage.
- "We have the best technology in the world for our industry.
- "We have highly-skilled workforces in Ohio and Mississippi that can provide a steady supply of components and cable that are world-class quality and cost competitive.
- "Our Mexico Operations are second to none.
- "We have an extremely good reputation as a high quality and responsive supplier to NUMMI and

Volkswagen, and we are earning that same reputation with Saturn.

- "Packard has forged an outstanding partnership with the IUE, which must serve as a model for us as we expand around the globe.

- "The Excellence concept is our major advantage. The Excellence attitude — innovation and continuous improvement — will keep us number one in everything we do.

"We have no other choice than to acknowledge and accept the challenge that is ahead of the Multi-National SBU and the rest of the division," Williams emphasized. "That challenge is to beat the competition. We don't want Packard to be number two.

"We cannot exist as a collection of stand-alone, uncoordinated operations around the world. We must join together to achieve the optimal results for Packard worldwide."

—RSC

From a supplier's point of view

The president of Plymouth Rubber Co., Inc., a long-time Packard Electric supplier, looks at the changing relationships between the division and its vendors

As Packard Electric pushes to strengthen its competitiveness, the relationships between the division and its suppliers are being redefined.

Plymouth Rubber Company, Inc., a Canton, Mass., based firm that has supplied pressure-sensitive harness tape to Packard since the 1960s, is adapting to meet the needs of its largest customer in the 1990s. Maurice J. Hamilburg, the president of Plymouth Rubber, provided a supplier's eye view of Packard in an interview with the **Cablegram**.

Cablegram: From your perspective, how has Packard Electric changed in the last 15 years?

Hamilburg: What I've personally seen change is that Packard and General Motors are taking a more long-term view of their business. Packard's view of itself now seems to be much more oriented toward a worldwide perspective, as opposed to simply seeing itself as a U.S. business.

GM, like most American businesses during the last few years, has had to reassess its position in the world and do a number of things to improve its competitiveness. We've seen that very strongly at Packard in the last few years.

Also, in the last three years I've seen an intensified effort by Packard to improve the quality and reduce the cost of the product. It seems that now people are looking at the product almost as a blank slate and asking themselves, "How can we best engineer this thing to produce a wiring harness at the best quality and the lowest cost?" There seems to be less emphasis on simply buying a low-cost standardized item and more emphasis on the total combination of price, quality, delivery and value.

Cablegram: How has GM's program to reduce the number of suppliers it buys goods and services from, Supplier Rationalization, affected the way you approach your own business?

Hamilburg: As Packard moves away from a multi-sourcing philosophy toward a single-sourcing philosophy, both the supplier and the customer realize benefits.

The most obvious, of course, is that as the volumes increase for the supplier, we are able to drop our selling price. Something that is a little less obvious is that increased volumes, coupled with the continuity of a longer-term relationship, both forces and allows the vendor to take a longer term view of his business as well — particularly regarding investment decisions and research and development allocations, in

'Packard and GM are taking a more long-term view of their business. Packard's view of itself now seems to be much more oriented toward a worldwide perspective. . .'

addition to product improvement and cost reduction.

The advantage of this approach is it allows us to invest time, money and resources in our business. By working cooperatively, both Plymouth Rubber and Packard Electric can jointly reduce our cost structures. This will make us both more profitable; we at lower prices and you at lower costs.

Cablegram: What kind of customer is Packard Electric?

Hamilburg: The most immediate response that comes to mind is the size of your organization — you are very big. This requires us to take a thoughtful approach to dealing with Packard because of the scale of operations here relative to many of our other customers.

In order to be an effective supplier to you, we must deal with a large number of people and we need to know who at Packard is responsible for what. If we don't get to the right people in your organization, things don't happen the way they should because of the high degree of specialization you have.

Packard, from a quality standpoint, is also a demanding customer. However, I don't think Packard is unreasonable. Packard is demanding, yes, but you are willing to live with what you have agreed to.

Cablegram: How have Packard's Excellence concept and the Targets for Excellence strategy — GM's assessment process designed to evaluate suppliers and help them continuously improve their operations — affected the way Plymouth Rubber does business?

Hamilburg: Frankly, we felt a little apprehension when we first heard about them. We were concerned about how beneficial they would be, what they would involve, if we could react — all the normal questions that arise when you are confronted with something new.

But as we began to understand Excellence, we became supportive. In general, it's a pretty good overview of how most American manufacturers feel they have to improve themselves to be well-run companies.

Targets for Excellence has been useful to us because as we got into the self-assessment process, it helped us focus on areas where we need to make changes and to recognize where our strengths are. The whole program is in some ways like a free consulting service performed by people who may not be professional consultants but who certainly have a lot of experience in assessing companies.

Cablegram: Have you seen a change in the way Packard and Plymouth Rubber interact?

Hamilburg: Yes. I am starting to see more interaction between people other than your buyers and our own sales people. There always was interaction between materials engineering, manufacturing, quality assurance, production control, and our own people, but we're starting to see a great deal more of it.

We're also seeing a change in the roles all of the people play in the vendor-customer relationship. I see the people outside of Packard's purchasing organization and Plymouth's selling organization taking a more aggressive role in product improvement — a more proactive role rather than just being concerned with maintaining the status quo or firefighting problems.

Cablegram: How has the Supplier

'We're seeing a change in the roles all of the people play in the vendor-customer relationship.'

Rationalization effort changed the role of the purchasing agent?

Hamilburg: As the buying philosophy has changed, the purchasing function is also evolving.

As you go to a single-sourcing philosophy, the annual contract negotiations will take up less of the buyer's time because there won't be as many contracts to negotiate. But the result isn't that the buyer will have nothing to do; the result is the buyer's job becomes more broad and complex. This is because the buyer now has to deal with a product that isn't as highly standardized. The buyer must act as the catalyst between all of the other Packard functions and the vendors to continuously improve the product.

The change in the relationship between vendors and purchasing agents that is underway here actually should make doing business a lot more fun for the people in both companies. I think

most people are more motivated and fulfilled by adding value and actually improving things as opposed to playing the "games" that contract negotiations unavoidably entail.

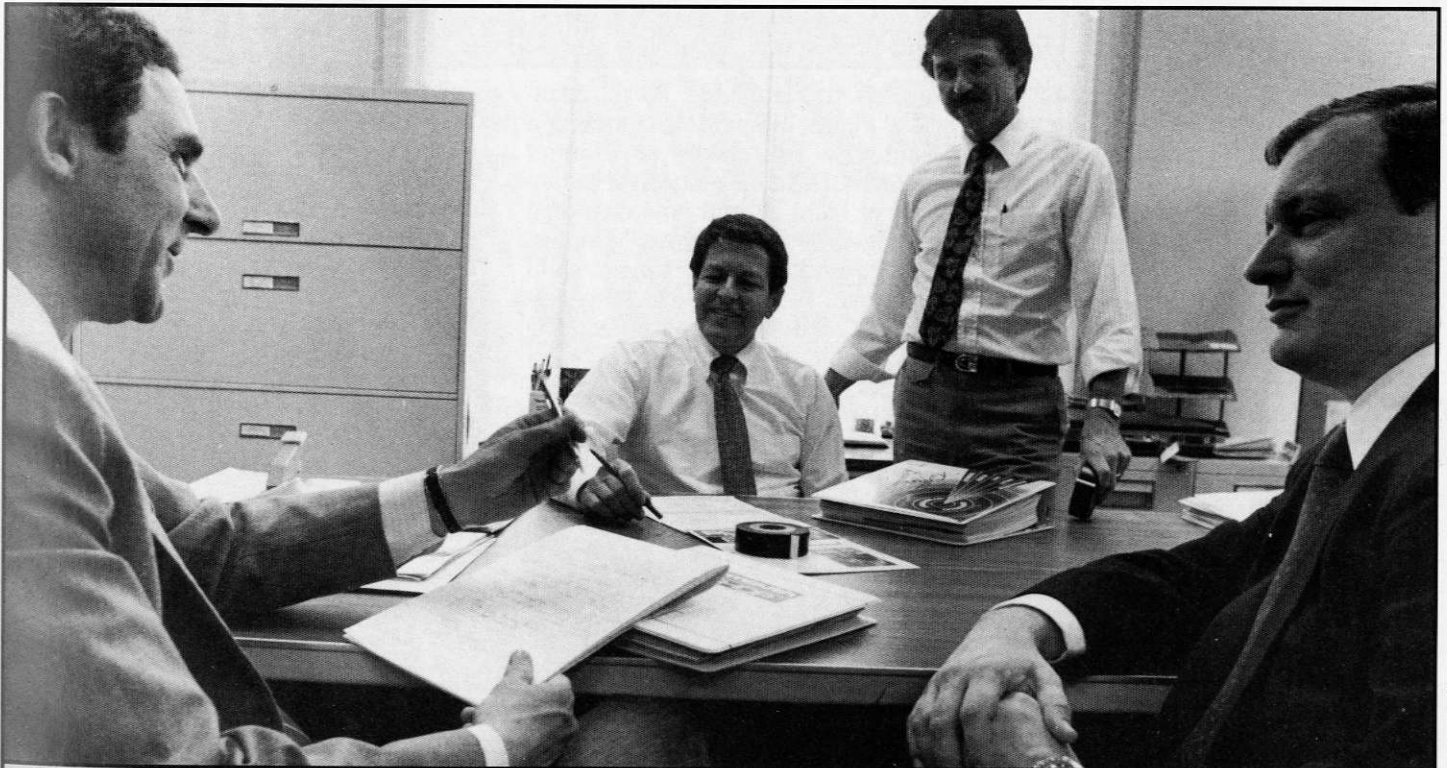
Cablegram: What additional benefits of Supplier Rationalization do you see?

Hamilburg: To realize the maximum benefits from this program, it has to be long term — Packard has to keep the momentum going. The linchpin of the single-sourcing concept is strong, profitable vendors, not weak, profit-starved vendors who have been pushed to the wall.

I think that GM is committed to the idea that a partnership with their vendors necessitates, over a long period of time, that both companies make profits. That must be based on the fact that both companies are world-class competitors — strong, profitable and able to reinvest in their businesses.

We want our business with Packard to be a core business for Plymouth Rubber. It has to be profitable for us, but at the same time we want it to be business that we're investing time, money and resources in constantly. In that way, we will be a much better source for Packard today and in the future.

—RSC



Michael Nicholson (far left) and Maurice Hamilburg (far right) of Plymouth Rubber Co., Inc., discuss the division's harness tape needs with Dick Sahr (center) and Tom Shepherd of the Packard purchasing organization.

Mississippi employees sharpen basic math, reading skills

by Danny Greene

As American manufacturing demands become more technological, functional illiteracy has become a national crisis damaging this country's ability to produce quality goods and compete in a global market.

Figures compiled by the Business Council for Effective Literacy show that nearly 15 percent of the American workforce is functionally illiterate. More than 23 million adult Americans cannot read, write or perform math skills above the fourth-grade level.

Packard Electric's Clinton, Miss., operations is doing something to combat this national problem.

Currently, 120 employees from Plants 21, 22 and 24 are enrolled in the Job Related Basic Skills Improvement Program. This three-year training effort, in which employees attend classes on company time, is supported by a \$440,000 grant from the GM/IUE Training Fund.

Initial emphasis is on reading and math skills. Math skills include decimals, fractions, percentages and metric measure; functions essential for Packard's manufacturing processes. Quality control standards such as General Motors Product Compliance Procedures (GMPCP), engineering specs and Statistical Process Control charts represent the kind of mathematical information operators must now process daily.

Training needs surfaced when Packard's Clinton facility converted

from labor-intensive manual assembly of wiring harnesses to lead cutting and component manufacturing. Employees originally hired to use their hands were reassigned to run computerized machines and deal with specifications and measurements that were sometimes complex and often baffling.

These new work demands, plus the pressures of competitiveness and Packard's quest for Excellence, called for changes. A task force

skills levels. From this number, about 100 were initially placed in Phase I or Phase II, depending on their abilities. Phase I takes the student to about the fifth-grade level in math and language skills. Phase II picks up from there and covers material through the high school equivalency level. At present, there are 40 employees in Phase I and 80 in Phase II.

Standardized texts and software serve as the core of the curriculum, but instructors also incorporate

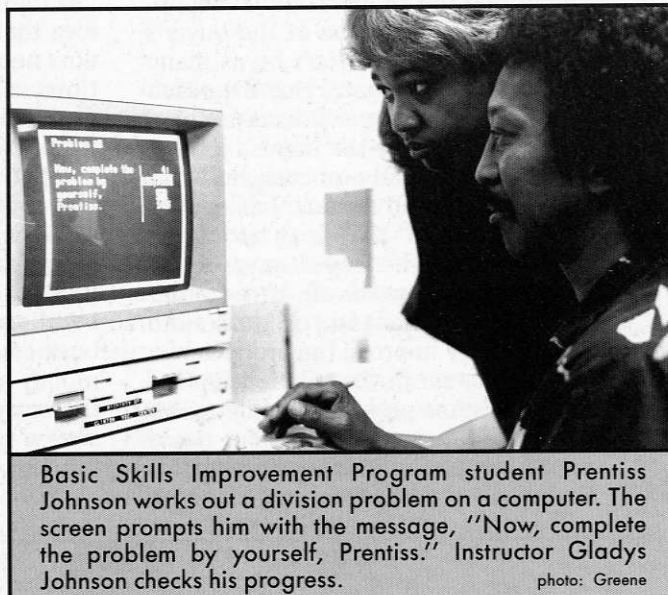
Packard terminology and job-specific information into each student's learning package. Employees who once had trouble reading job instructions, control charts or quality standards can now do so.

"When I run double stroke, I have to half the lead length on my cut card," said LAT Operator Maurice Ward. "Before I got into this program, I couldn't divide numbers with decimals. Now I can."

The skills employees obtain through this training produce benefits which go beyond the workplace. Operator Gloria Campbell is

delighted with her new abilities. "Last week when I went to the fabric store," she said proudly, "I had my bill figured up before I got to the check-out."

Personnel Director Terry Lee sees the Basic Skills Improvement Program as essential to the operation. "Our commitment is to provide these skills to employees who desire them," said Lee. "Our future in Mississippi will depend on securing an educated and motivated workforce to meet and exceed our future challenges."



Basic Skills Improvement Program student Prentiss Johnson works out a division problem on a computer. The screen prompts him with the message, "Now, complete the problem by yourself, Prentiss." Instructor Gladys Johnson checks his progress.

photo: Greene

headed by Talmadge Portis, manager, Plants 21 and 24, launched a plant-wide basic skills assessment program. Dave Meyers, former manager of Plant 22 and now divisional manager of Synchronous Manufacturing, and Horatio Jones, shop chairman, IUE Local 698, also performed vital roles in forming the task force.

Nearby Hinds Junior College administered the Test of Adult Basic Education (TABE) to 400 employee volunteers to determine their basic

PACKARD ELECTRIC DIVISION, GM
Warren, Ohio U.S.A. 44486
RETURN POSTAGE GUARANTEED
Address Correction Requested

U.S. Postage
PAID
Permit No. 210
Warren, Ohio
Zip Code 44486

Third Class Mail