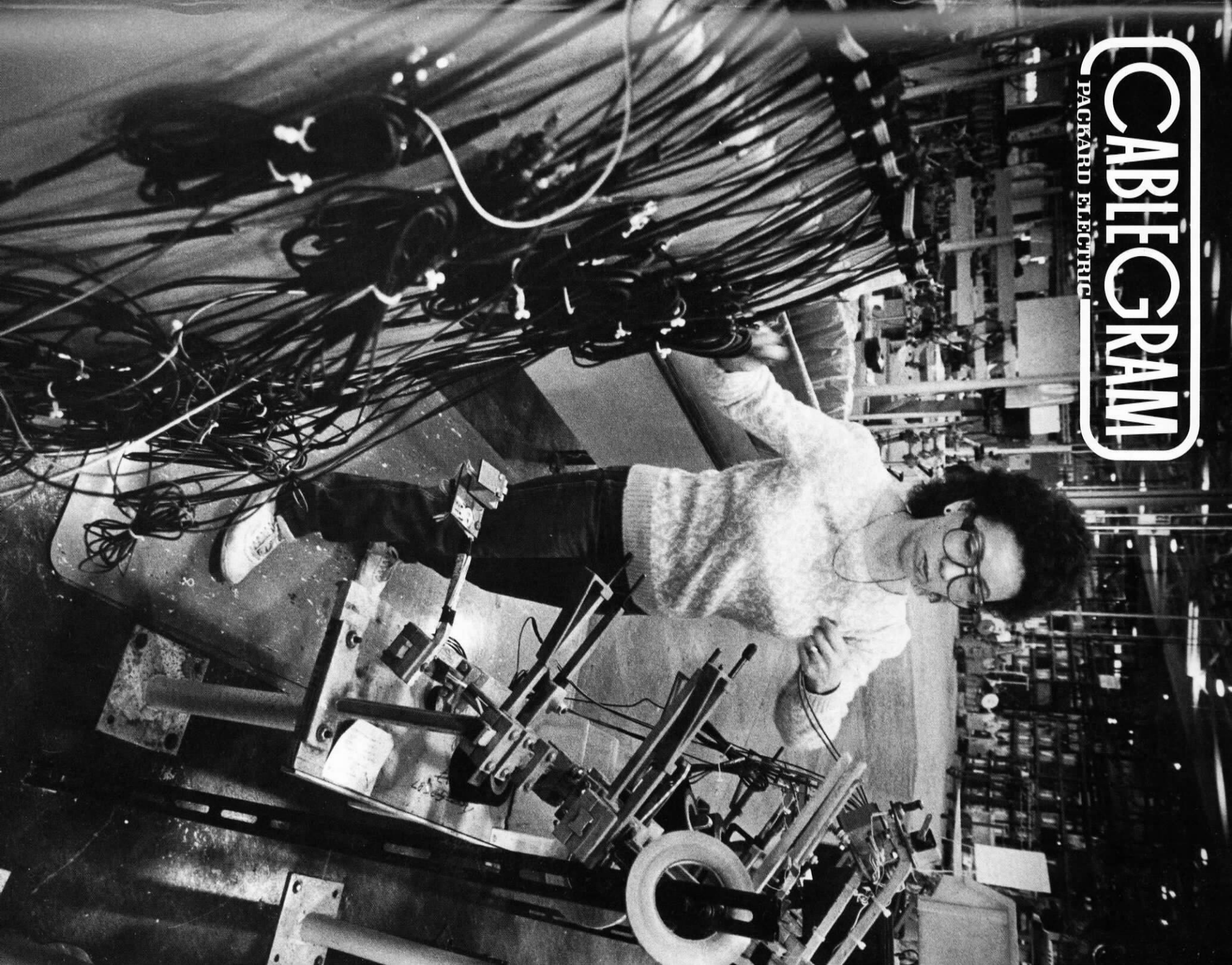


# CABLEGRAM

PACARD ELECTRIC



photos: Carney



## PPS in action

By implementing the Packard Production System (PPS), Plant 49 is dramatically reducing the amount of in-process inventory and floor space needed to produce coolant fan sub-assemblies. John Golias, Dept. 4907, secures long leads as part of the coiling operation. Story, Pages 4-5.



**On the cover:** Mary Ann Dean builds a coolant fan sub-assembly on a stationary board in Dept. 4907.

## Where the action is

**Pages 6-7**

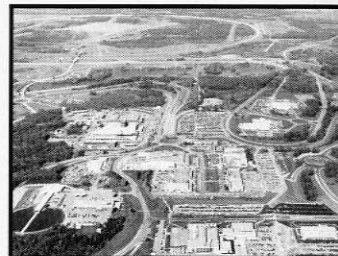
Packard's customer service center, located in the Detroit area, is strategically located at the hub of the North American automotive industry.



## Passing the test

**Pages 8-9**

At the Milford Proving Ground, GM performs rigorous road and laboratory tests on current and future vehicles. Packard has a resident team of engineers at Milford who make sure Packard's products successfully pass this barrage of tests.



## Scrap as art

**Page 10**

Employees at Plant 23 in Brookhaven, Miss., are turning scrap into *objets d'art* to draw attention to the plant's campaign to reduce waste.



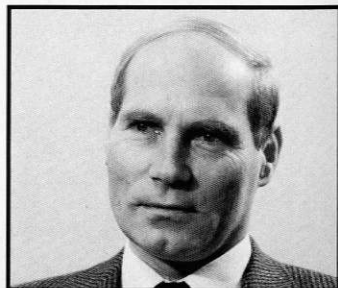
### Packard Electric Cablegram

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## Success story

**Pages 10-11**

Eight years ago, Packard and Kabelwerke Reinshagen formed a partnership to produce power and signal distribution systems for the global marketplace. Reinshagen's managing director, Hans-Juergen Weiser, looks at the partnership's past — and future.



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# Human resources: the key to survival

**P**ackard people — the Packard “family” — are its most precious resource. More than ever, we realize it's also the most important key to Packard's survival.

Packard's family is larger than most — more than 40,000 members worldwide — and wonderfully varied. We speak more than 10 languages and work in five continents. In turn, Packard is part of the General Motors family, an even bigger clan.

GM reaffirmed its commitment to its people in October at the Leadership Conference in Traverse City, Mich. The top executives in the corporation pledged their support of a people philosophy based on four beliefs and values: trust in people, teamwork, continuous improvement and customer satisfaction.

It should sound familiar. Years ago, Packard recognized the importance of

these values. They're part of the Packard Principles and have been re-emphasized through the Excellence concept.

Human resources is one of Packard's six business objectives. Our goal is to provide human resources consistent with our business plan, and create an environment for every employee which encourages participation and self-development for personal success and the long-term success of our business.

These words are terrific, but the challenge is to back them up with actions — to walk like we talk.

We are making progress in this area at Packard. Our employees are becoming more involved in running our business through concepts such as Excellence, the Packard Production System, and joint efforts with our unions.

We are also investing in our people.

Packard employees received thousands of hours of on-the-job training at the Excellence Training Center during the 1988 model year. They also received thousands of hours of off-the-job development through GM's Tuition Assistance Program.

If everybody at Packard becomes committed to a people philosophy based on trust, teamwork, continuous improvement and customer satisfaction, we become stronger as an organization and as individuals.

It's going to take a real commitment by every member of the Packard family to keep us number one as we move toward the 21st century. Processes, machines, and buildings don't design and produce quality products. People do; people who care and are treated with respect as adults and business partners. People are what it's all about, what it has always been about, and what it always will be about.



ELMER E. REESE  
General Manager  
Packard Electric Division

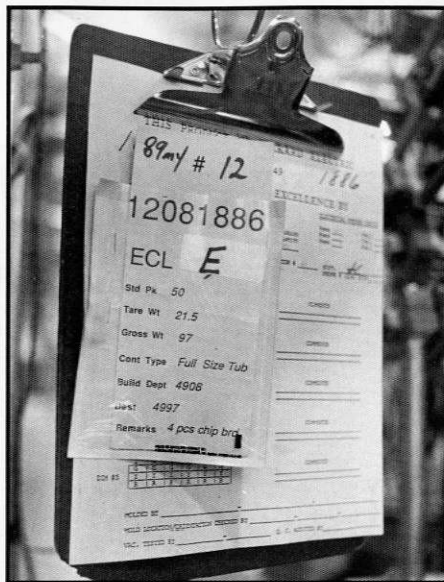
# Plant 49 embraces the Packard Production System, with dramatic results

**I**t could be called the "incredible shrinking department."

Dept. 4907 in Plant 49 is dramatically reducing the amount of in-process inventory and floor space needed to produce coolant fan sub-assemblies by implementing the Packard Production System — one step at a time.

These small steps have led the department, which is tucked away in a corner of the Ohio Operations' former shipping floor, on a journey of continuous improvement according to Paul Romer, Plant 49 superintendent, and Walt Latimer, general supervisor.

Plant 49 produces 10 different types



Kanban cards generated by customer requirements for material drive production in Dept. 4907.

of elementized wiring harness sub-assemblies for C- and H-cars (Oldsmobile Ninety-Eight, Cadillac DeVille and Fleetwood, Buick Electra, and Pontiac Bonneville). It began production in May 1987. The plant's approximately 530 employees primarily do splice assembly and build sub-assemblies on stationary boards.

## PPS to the rescue

In June 1987, when Dept. 4907 began building coolant fan sub-assemblies, it required 8,600 square feet of floor space and \$145,000-worth of in-process inventory to do the job.

photo: Carney

"We experienced significant problems in the coolant fan area when we began production here, especially with tangling," noted Latimer.

"Those tangling problems equated to quality problems, which then created an output problem. We also had material flow problems — getting the right material to the right place at the right time. Often, we found ourselves building the wrong material just to keep people busy.

"Along with that, we had internal scheduling and inventory control problems," he continued. "In effect, we built in-process inventory to keep people busy and we got very comfortable with two to three days' worth of inventory between each operation."

Latimer said these problems forced Plant 49 to "totally redesign" the coolant fan area using Packard Production System (PPS) principles.

"As we began to understand the PPS concepts, we recognized that was the only way we could solve these problems."

## Improving continuously

In January 1988, Plant 49 began to implement the Packard Production System in Dept. 4907.

"The real story of this project is the in-line concept of the splice press," Latimer explained. "Before, we would build on one splice press, move the material, store it on a rack, move it again to the second press, and store it again.

"With the in-line system, the first operator puts the material on a knife-edge rack instead of building it to a storage rack. As the first operator puts the material on the rack, the next press operator takes it off; thus, the 'dispose' of the first operator becomes the 'get' of the second operator."

"This method reduced the amount of storage between these two operations from a matter of hours to a matter of minutes," said Romer.

The new system quickly illustrated the advantages of synchronous manufacturing, or the continuous flow concept. The in-line system, along with other changes, freed up 300 square feet of floor space and allowed Dept. 4907 to cut its in-process inventory to \$39,000 by May 1988.

## Wait — there's more

Encouraged by their success, Dept. 4907 "went on an all-out attempt to make our operations synchronous for the 1989 model year," Latimer said.

Plant 49 employees and managers worked together to rearrange Dept.



Plant 49 has eliminated its need for a finished goods inventory store by implementing a "pull" scheduling system. The 8,000 square feet of floor space formerly occupied by these empty racks can now be used for more value-added processes.



4907 for the new model year, moving the coiling operations closer to the splice press operations and arranging the stationary boards in fan-like configurations.

As a result — even with a 23 percent schedule increase — Dept. 4907 eliminated the need for another 4,100 square feet of floor space and an additional \$30,000 in in-process inventory by September 1988.

"By making a series of small but continuous improvements we were able to reduce our floor space from 8,600 to 4,200 square feet and our in-process inventory from \$145,000 to \$9,000 in 16 months," Latimer observed.

#### Added benefits

In addition to these benefits, Plant 49 has improved the quality of its products since it began implementing the PPS.

"We still have quality problems," noted Romer, "But as you lower the level of inventory, they become evident much more quickly. This requires immediate action to get the problems resolved, so our responsiveness has also improved."

#### Pull system

Plant 49 operates on a "pull" system; customer requirements drive production schedules.

"We receive daily orders from our customers, the elementized wiring

plants," Romer stated. "Those orders are generated on an on-line replenishment system — a sort of electronic kanban system.

"Our customers input information into a computer that tells us what they need to replace material they used the day before. We then schedule our production accordingly using actual kanban cards in the plant."

As a result of closely scheduling manufacturing operations to the customer's anticipated requirements, Plant 49 has eliminated its finished goods inventory store. "We now essentially build the product and immediately put it in transit to our customer," Romer said.

"Our inventory store no longer exists. Today, it's basically collecting dust. This has freed up another 8,000 square feet of floor space."

Romer says Plant 49 plans to use its free floor space to further synchronize its operations. "We plan to relocate the cut and lead prep operations from Plant 16 here to Plant 49. We would then be responsible for nearly all of our own cutting and lead prep splice assembly and sub-assembly — more of a full-process plant."

#### PPS power

Dave Meyers, Packard's synchronous manufacturing manager, said Plant 49's continuous improvement is a classic example of the Packard Production



Paula Hoffman, Dept. 4907, splices together pull-to-seat assemblies and cut leads for coolant fan wiring harness sub-assemblies. This operation follows the coiling operation.

photo: Carney

System's potential power.

"In the past, nobody would have thought you could take inventory down to that level or make such drastic reductions in floor space. Plant 49 accomplished it through a team effort and by making small, incremental changes that added up to big results."

—RSC



John Golias (right) coils pull-to-seat assemblies for buildability and material respect in Dept. 4907. This operation begins the synchronous process. Jim Crawley (left) then splices together pull-to-seat and cut lead assemblies. In effect, Golias' "dispose" become Crawley's "get."

photo: Carney

# Packard's customer service center, strategically located at the hub of the North American auto industry, gives the division a competitive edge

**T**o be successful in business, you have to go where the action is.

For vehicle component manufacturers such as Packard Electric, that place is Detroit — "Motown" — the hub of North America's automotive industry.

In the late 1940s, the division set up the Detroit Sales Office to establish Packard's presence in this important strategic location.

The Sales Office has had various locations, most recently at New Center One, across the street from the General Motors Building, in downtown Detroit. In 1986, the Sales Office moved to Troy, Mich., to a building it shares with Delco Remy Division. By the first of the year, 45 Packard employees will operate from this location.

"We are 20 minutes away from about 35 of our customers in our current location," said George Kralovich, director of Sales Engineering. "We saw more customers the first month we were here (Troy) than we did in two years at our downtown location."

## More than a Sales Office

Although Packard's Detroit location is officially known as a "Sales Office," Kralovich said this is a slight misnomer.

"This facility is home for many things besides sales activities; it's actually a customer service center. Our account managers are the business interface between our customers and Packard.

"We have a design model shop here and are able to build prototypes for our customers. This is an added service for our customers that used to be done at the vehicle groups' facilities. We also have a product display room, which is a great training tool.

"Several of Packard's resident engineers and cooperative involvement en-

gineers who service customers in the Detroit area are based here. Three people from Pioneer Standard, the distributor for Packard components, are here to represent Packard in the Michigan area.

"In addition, we host meetings with Truck and Bus, C-P-C and B-O-C that deal with partnerships, cost reduction, product reviews and many other current topics. Likewise, various meetings are held at our facility with other divisions in GM's Automotive Components Group — unique in that they are both partners and customers."

"It hasn't been too long ago that we didn't know our counterparts at the other component divisions very well," observed Gene Donoghue, Sales Engineering manager. "Now as a result of these meetings — and our new location — the relationships have improved greatly."

Donoghue said these meetings help Packard get to know its customers — and other GM divisions — better: a competitive advantage. "This makes Packard — and GM — more effective since we all have to work together in order to produce world-class quality vehicles."

## Yazaki's here too

Packard's competitors also recognize the value of having a presence in Detroit. Yazaki, the division's major competitor, has established a facility near Plymouth, Mich., which houses sales, engineering, warehousing, and prototyping activities and employs about 300 people, according to Kralovich.

"We have been able to take away some of our competitors' enthusiasm to get our business when they see Packard's presence here and see how well we're able to interface with other GM people," said Kralovich. "We are also able to get a lot of information about what our competitors are doing

# CABLEFOCUS



Packard moved the Detroit customer service center to this building in Troy, Mich., in 1986. Packard shares the building with Delco Remy Division.



by being here in the 'capital' of the automotive industry."

#### **Polishing Packard's image**

From a customer's perspective, Packard's customer service center in Detroit enhances the division's image

and sharpens Packard's competitive edge.

"There's no question that you need a presence in Detroit to be a major competitor in the automotive marketplace," Kralovich said.

"Packard has traditionally been a leader in servicing our customers, innovation and continuous improvement. And it's paying off. Our customers are telling us, 'Packard, you guys have really done it right.'"

—RSC



photos: Carney

George Kralovich, director of Sales Engineering (second from left) points out highlights of the product display room at Packard's customer service center in Detroit to Packard employee David Boze (far left), Michelle Robandt of Saturn Corp. (third from left) and Gene Donoghue, Sales Engineering manager (far right).

# Living Laboratory

**A team of Packard Electric engineers are on-site at Milford Proving Ground, making sure the division's products can take anything GM's test drivers dish out**

**V**isiting the General Motors Milford Proving Ground is like dropping in on GM's future; and the view includes Packard.

Tucked away in the outskirts of Milford, Mich. — a village located about an hour's drive from Detroit — the Milford Proving Ground is the largest site where GM performs road and laboratory tests on current and future vehicles.

Guests at Milford can see test drivers logging thousands of hours behind the wheels of exotic concept vehicles, prototypes of vehicles scheduled to appear

in future model years and current production vehicles.

Each hill, curve or bump at Milford is patterned after an actual road condition somewhere in the country. The accumulation of these simulate what a vehicle subjected to hard use might see.

Since 1985, Packard Electric has been part of this unique milieu. The division has a small office there which houses four employees who make up Packard's "Resident Team."

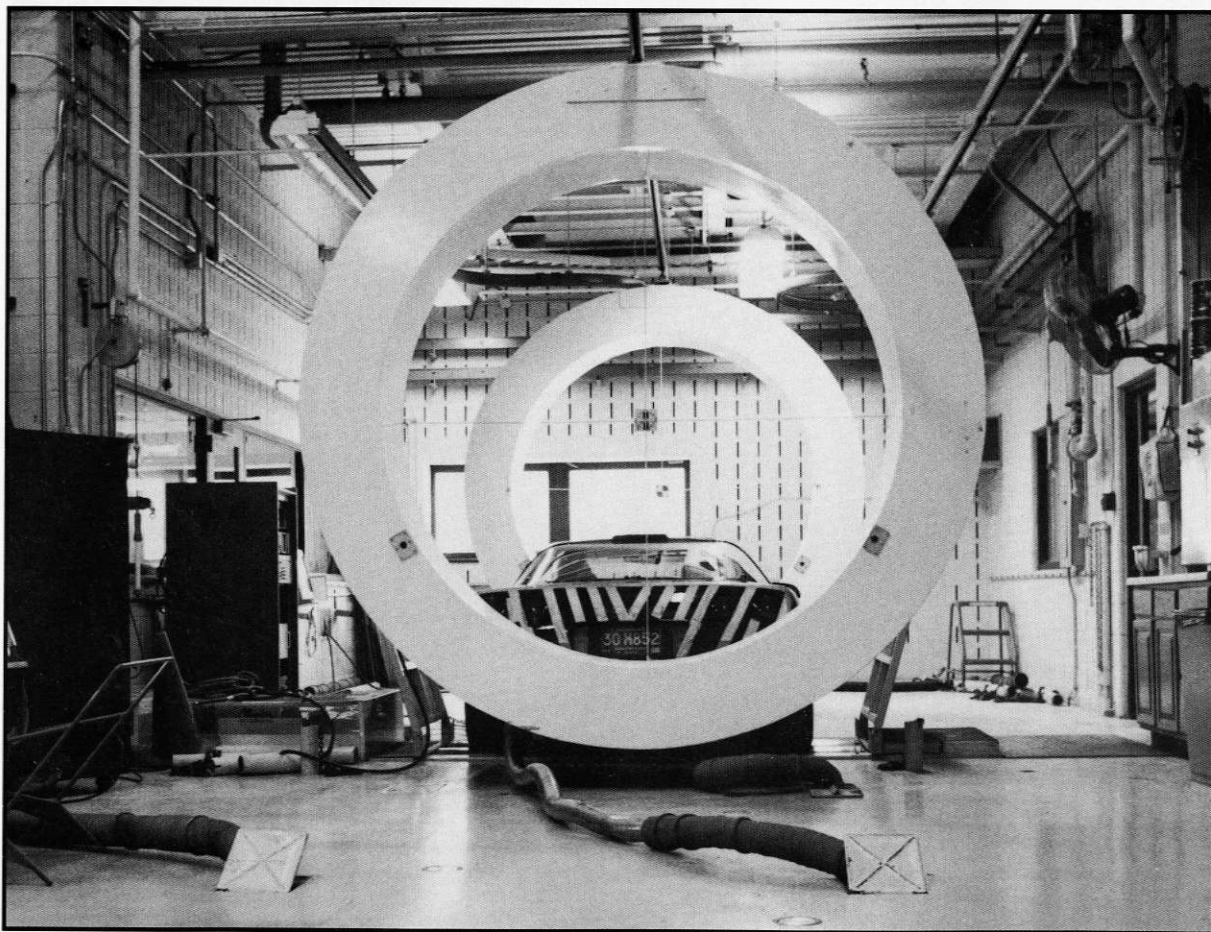
#### **'Sherlock Packard?'**

Dawn Eaton, Packard's resident engineer at Milford, describes Packard's

Milford Proving Ground office as "a little detective agency."

"We investigate problems our customers are having with our products and communicate this information to the appropriate group at Packard, trying to track down solutions to these problems as fast as we can," she said. "We act as a communications liaison between Packard Electric and our customers."

"Having our own people on site at Milford gives us a big advantage," said Carl Vanden Wymelenberg, assistant staff engineer, Product Assurance.



A Corvette undergoes a test at GM's Milford Proving Ground. The "giant circles" create a magnetic field around the car, simulating the effect power lines have on a vehicle's electromagnetic performance.





photo: Carney

Dawn Eaton (left), Packard's resident engineer at Milford Proving Ground, and Mark Fuhrmann, a Corvette test analyst, examine the engine harness in a 1989 Corvette.

"They provide good, accurate, fresh information about our products' performance under test conditions. Our presence at Milford also opens the door to vehicle-level testing of our own components." Vanden Wymelenberg added most GM component divisions now have personnel on-site at Milford.

#### **'Wiring ombudsmen'**

"Packard people at Milford become wiring ombudsmen — people who investigate customer complaints and are a source of information about wiring," Vanden Wymelenberg observed. "Their job is to support Packard's customers at Milford."

When customers at the Proving Ground experience a problem with a Packard product during a test, they issue a Test Incident Report (TIR), a form that records abnormal test results. Packard's Resident Team then investigates the problem to help their Product Engineering partners choose the best corrective action.

"Now that we have people at Milford, we are usually well on our way to fixing a problem before a TIR is issued," said Vanden Wymelenberg. "We are much more proactive. As a result, the number of Packard's problems per test car has decreased, while responsiveness and customer satisfaction have increased. We are starting to see improvement in electrical warranty charges as well."

Packard personnel work closely with people from other component divisions at Milford. "Because our product touches everything in a vehicle, we have to work with all of the other divisions," Eaton observed.

Another concern at Milford is obtaining replacement parts for test vehicles. The Packard Resident Team has set up a parts crib system that enables customers to replace Packard components quickly and easily, and facilitates the return of failed parts for analysis.

Customers appreciate the division's presence at Milford and feel it gives the corporation — and Packard — a competitive advantage.

"I strongly support having Packard Electric people on-site," said Jim Byrne, director of Durability Testing and Development at the Milford Proving Ground. "It's one of the best things that ever happened here."

"Now, when a test driver comes in from the track and says, 'It's doing something today that it didn't do yesterday,' he is able to describe the situation to someone who can analyze the problem immediately."

"Milford has almost become a living laboratory for component divisions," Byrne continued. "We find that now, more than ever before, GM design engineers are responsive to what we find at the Milford Proving Ground. The problems are getting fixed."

# Waste isn't pretty. But at Brookhaven, employees have transformed scrap into art to build support for Plant 23's drive to cut costs

by Danny Greene

Some sculptors have grown wealthy by turning scrap into *objets d'art*.

Employees at the Brookhaven Plant have added a new twist to that idea. Artists Claude McCaffery and two other Plant 23 employees have converted scrap into art, not to make money but to save it.

Assisted by Rex Reeves and Calvin Lyons, McCaffery devised 11 pieces of eye-catching sculpture from scrap and other material that represent waste and lost profits. A twelfth exhibit displays various tools and material — each with a price tag — to show that everything has a cost.

All 350 employees at Brookhaven are encouraged to view the exhibition. A number of employees have viewed it several times.

What brings them back are pieces such as:

- Baskets and belts woven from scrap cable
- A display comparing the price of T-bone steak (\$5 per pound) to the price of 8917861 terminals (\$11.95 per pound)
- Cartoon characters made of solder dross
- A big, blue snake made of shop towels called "Rag-On-A-Roll Rattler"
- A gold tire filled with scrap cable and terminals reminding employees that an average car contains 1,800 feet of cable and 900 terminals. It asks the question, "Did you scrap a car today?"

Billed as the "Non-conformance Ma-



Claude McCaffery, Rex Reeves and Calvin Lyons (left to right) examine a piece of "scrap sculpture" in Plant 23. The *objet d'art* is part of the Brookhaven Plant's drive to reduce waste by 25 percent over its 1988 model year performance.

photo: Greene

terial Display," the exhibition grew from the goals of Plant 23's six-member, plantwide Scrap Committee. The main goal: to reduce scrap by 25 percent over 1988's model year performance.

Half the battle is finding out where the defects occur in the first place. On one front, Receiving Inspection is returning unacceptable material to the source. Another investigative step is to weigh scrap at each cutter and chart it.

"We are not pointing fingers at operators," said committee member Butch Beasley, Dept. 2341. "We chart scrap to determine if equipment is causing a

problem. If operators know where the problem is," he continued, "they'll attempt to solve it themselves."

Employee awareness is the key purpose of the project, said Quality Engineer Dave Eckman. He added, "Most employees will take heed of the message we're trying to communicate."

Although employees have always been somewhat aware of the scrap problem, McCaffery's handiwork helps to emphasize the many ways scrap occurs.

Or, as Plant Superintendent Ed Zuga put it: "A picture's worth a thousand words."

## Eight years later: Hans-Juergen Weiser, managing director of Reinshagen, Packard's European partner, looks at the past and future of this successful alliance

Eight years have passed since Packard Electric and Kabelwerke Reinshagen formed a partnership to produce power and signal distribution systems for the global marketplace.

Hans-Juergen Weiser, managing director of Kabelwerke Reinshagen, looked at the changes that have occurred since this partnership began and the challenges it will face in the 1990s during a visit to Packard's world headquarters in Warren.

**CABLEGRAM:** What is the major change that has taken place in Reinshagen's market during the past year?

**Weiser:** We have a permanent change every year; it is an ongoing process. But in the past year, the car manufacturers began looking ahead to the formation of the EEC — the European Economic Community — in 1992.

The EEC means we will have a higher level of competition. We must be prepared to counteract an "invasion"

coming from Japan, and maybe from the U.S. also.

**CABLEGRAM:** How will this affect Reinshagen's business?

**Weiser:** The EEC, which will be realized by the end of 1992, means that there will be no barriers in the trade of goods, services or money between European countries.

This will mean stiffer competition in Europe. Business will be conducted in a

(Continued on Page 11)



# Cablegram readers provide feedback via survey

In the September/October issue, the **Cablegram** staff asked you to give us some feedback by completing and returning the reader survey form enclosed in the magazine.

Employee publications should reflect and report on the people, issues, and direction of the organizations which they serve. The **Cablegram** has changed to illustrate the changes Packard itself has experienced during the '70s and '80s.

In the past 15 years, Packard Electric has become international. We have grown from a hometown company with approximately 15,000 people in Warren, Ohio, to a globe-spanning division with more than 40,000 people.

The **Cablegram** strives to keep pace with this growth. Its purpose is to report, in-depth, about what is happening at Packard worldwide; communicate the division's vision and plans, and show what this means to you.

We distribute the **Cablegram** to employees in the Ohio and Mississippi operations, and send it to Packard locations outside the United States. We mail it to retir-

ees across the country, as well as community leaders in Warren, Ohio, and Jackson and Brookhaven, Miss.

Thanks to the 375 of you who took the time to let us know what you think of the **Cablegram**. We distributed 5,219 surveys to active hourly and salaried employees; our rate of return was 7 percent.

You may obtain complete survey results by contacting the **Cablegram** staff at Mail Station 90M, extension 2684. We recapped highlights of the survey, which follow.

## Cablegram Survey Highlights

- 32 percent of respondents read everything in the **Cablegram**; 65 percent read one or two articles and skim the others
- 49 percent read the **Cablegram** every time it is published; 25 percent read it almost every time
- 45 percent would like the **Cablegram** published every other month; 35 percent would like it published monthly
- 68 percent believe what they read in the **Cablegram**
- 48 percent believe the **Cablegram** covers important issues that are significant to all employees

- 70 percent think the **Cablegram** looks attractive and up-to-date
- 55 percent get information from the **Cablegram** that they don't get from any other source

Survey respondents were asked to rate 12 general topics in terms of their importance to them. The results, from highest level of importance to the lowest:

1. Packard plans/outlook
2. Competition/competitiveness concerning or affecting Packard
3. Reasons for top management decisions
4. Quality improvement
5. Excellence
6. Packard customers
7. What's going on at Packard's international facilities
8. Job security
9. Packard suppliers
10. Human interest items
11. What's going on in my plant/department
12. Problems and obstacles I encounter on the job

(Continued from Page 10)

market of 320 million people. Companies that are not prepared to do business in this huge and competitive market will have little chance to survive.

**CABLEGRAM:** Speaking of Japanese competitors, where is Yazaki located in Europe and how does this affect Reinshagen's business?

**Weiser:** Yazaki is very clever. They are settling on the low-wage edge of the continent. They have facilities in Portugal and Spain, and from those positions they can really offer each carmaker low-cost components.

However, Reinshagen is prepared for their strategy. We were in Portugal and Spain before Yazaki. We have well-placed, well-managed operations there that can equal or exceed whatever Yazaki can do.

**CABLEGRAM:** What is Reinshagen's "European Network" strategy?

**Weiser:** Germany is a good location for high-technology machinery operations and product and process engineering activities, but it's not a good location for low-cost assembly, which needs a lot of labor.

Knowing this, we have created what we call the "European Network," which places engineering and machinery-intensive business in Germany and labor-intensive business to the periphery — the south of Europe — in Portugal and Spain. We also have a joint

venture in Tunisia — northern Africa.

**CABLEGRAM:** Last year you addressed the possibility of doing business with East Bloc nations behind the Iron Curtain. What are your thoughts on this subject today?

**Weiser:** First, we must look at the political climate. It seems that the Soviet government is attempting to give these countries more freedom to trade with Western companies. However, nobody knows how long this type of climate will exist.

Business-wise, there is a huge, pent-up demand in East Bloc countries for a lot of things, including cars. We have established cooperation with a Hungarian partner. The goal of this partnership is to explore cable techniques, and the core of that business will be wiring for cars.

Hungary does not manufacture passenger cars; however, they are assigned to make components and ship them to those East Bloc countries that do assemble cars.

**CABLEGRAM:** How difficult is it to manage a business that spans so many different countries and cultures?

**Weiser:** It is a challenge on the one side and fun on the other side. Our employees speak ten different languages. English has emerged as the common language, although "continental English" is different from "London English" and "American English."

However, we have learned to understand each other and to listen to each other despite the differences in our languages and cultures. I think we enjoy it more than we find it to be a challenge.

**CABLEGRAM:**

It's been eight years since Packard and Reinshagen became partners. How has this relationship helped Reinshagen, and how has it helped Packard?

**Weiser:** It is a story of success for both of us.

At first, Reinshagen's customers had some problems accepting us as a supplier now that we were part of their big competitor, General Motors. But on the other hand, they understood that we would gain all of the technological know-how of Packard Electric and could offer that to them in our wiring systems.

Today, it's normal for engineers from BMW and Daimler Benz to go with Reinshagen engineers to the Engineering Center in Warren, Ohio, to design new systems. I think this demonstrates how big a success our partnership has become.



Weiser

Focusing on the customer . . . icada uno!

## Nuevo Laredo meets Doraville, Georgia

Virginia Peralta looks her customer square in the eye every day.

Each time Peralta inspects a newly-finished GM-10 harness assembled at the Nuevo Laredo II plant, she can't miss the picture of the man at the Doraville, Ga., plant "looking" back at her. The Doraville man is the next user of the Packard product; he puts the harness into a shiny new vehicle. The vehicle's mission: keep some customer happy — and wanting to come back to buy another.

Peralta's work represents the last leg of a Packard customer-focused effort that begins in Warren, Ohio, and Clinton, Miss., with millions of leads and thousands of fuseblocks heading to Mexico East for final assembly.

It's part of a new approach for the division: individual plants serving a single car-platform customer. It's one customer; one supplying team; one product line — uno!

Packard's advantage in this approach, according to Dino de Falco, GM-10 manufacturing manager, Mexico East, is "a tremendous gain in customer focus. It's dedication, responsiveness and total service commitment to each GM-10 car assembly plant."

In Mexico East, both Packard plants in Nuevo Laredo support more than 90 percent of the Pontiac Grand Prix and the Oldsmobile Cutlass Supreme wiring assembly content. Their customers are GM's Fairfax and Doraville assembly plants. The Guadalupe I and II Mexico East plants near Monterrey make the Buick and Chevrolet GM-10 wiring for the GM Oshawa, On-

tario, Canada car-assembly facilities.

Managing a group of final assembly plants dedicated to one car platform poses additional challenges, according to de Falco: "Customer plants' overtime, downtime, product mix and engineering changes have a direct impact on each plant for the Packard team. However, there is increased communication between the people on each end of the supplier-customer pipeline as they get to know each other personally. It's amazing how helpful this is in mak-

ing the highest in the division."

Alignment of the Packard plants to a single GM customer supports the Packard Production System in several ways: "It's very conducive to dealing with the customer and the customer's problems, which is the first practice of the Packard Production System. It emphasizes problem detection and prevention. Just-In-Time management of harness supply to the car assembly plants is facilitated," de Falco noted.

### The bottom lines

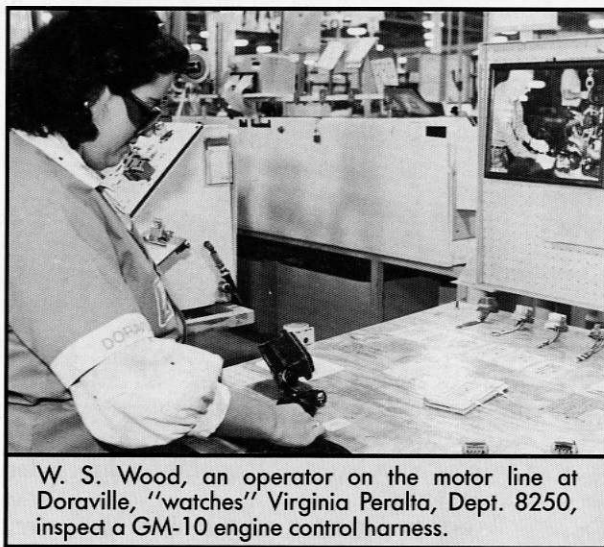
First-year results for Mexico East and the "platform alignment" are positive in the areas of quality, cost, delivery and customer feedback. "On quality, we finished the 1988-model year with 99.6 percent conformance-to-major characteristics rating. We did better than budget on costs and our delivery was at about 99 percent. Customer feedback was mostly very positive."

Continuous improvement is part of the Packard/GM-10 team's plans for 1989 — from Ridge Road through Mississippi, Nuevo Laredo and Guadalupe to the cus-

tomers. "The biggest challenge we have is to prove that the customer alignment arrangement is cost effective. We have also an opportunity to continue to improve the total material system, both from a design and execution standpoint — some improvements are already underway."

When asked about his team's greatest wish for the new year, de Falco said, "It is to sell every GM-10 car we can produce. They are beautiful cars, and we are optimistic about the future sales picture."

—MJH



W. S. Wood, an operator on the motor line at Doraville, "watches" Virginia Peralta, Dept. 8250, inspect a GM-10 engine control harness.

ing the business relationship work well."

de Falco went further with the intra-Packard communications associated with the entire Ohio-Mississippi-Mexico East team. "There has been a tremendous improvement in communication effectiveness. A prime example of this is with Ridge Road (Ohio) which is totally dedicated to supplying Mexico East with more than a million leads every day. All these leads, by the way, are supplied Just-In-Time and their quality is one of

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