Reese sees busy year ahead . . . Page 3



1984 suggestion activity gives Packard new record

by Mark Rollinson

Efforts by Packard Electric's mployes have paid off again—quite terally—both for employes and the twision for 1984 in the General Motors suggestion Plan. Breaking records in the suggestion program is becoming m annual routine for Packard.

Perhaps the most dramatic figures indicate that Packard Electric saved itearly \$7.2 million last year from the General Motors Suggestion Plan—a record amount and a whopping increase of 122 percent over Packard's record~1983 savings of about \$3.2 million.

Jim Mac Laren, supervisor, Suggesion Plan, compared Packard's 122 percent increase in savings last year to the 49 percent increase in savings the corporation.

Contributing factors

How can such an increase be aplained?

"There are a lot of factors," xplained Mac Laren. "The salaried mogram was a big contributor." He moted that 1984 was the first full year that salaried employes were eligible to participate in the program.

"Fifty-four percent of our salaried employes used the suggestion plan last year," emphasized Mac Laren. "We have a very high interest by our salaried people."

Mac Laren noted that 1984 was also the first full year for incentive awards. "We paid more than \$31,000 to our supervision for 835 incentive awards." The incentive awards, which are presented to supervisors of hourly and non-exempt suggestion plan winners, are not taken from the employes' award amount.

"Also, ambitious goals were set in every hourly and salaried staff area," said Mac Laren. "I think that was the one big factor."

Another factor Mac Laren mentioned which would explain the increase in divisional suggestions submitted leading to record savings to Packard Electric last year was award money paid to employes.

"We went from \$619,000 in awards to employes (1983), to \$1.1 million (1984)," stressed Mac Laren. "That's money in their pockets from the program."

He explained that the \$619,000 in divisional awards represented a record year for 1983. "We came off a record year (1983) and we far surpassed all of our statistics."

Nearly 98 percent of all the division's 1984 awards were for economic suggestions. "We're giving a greater priority to the high economic suggestions," said Mac Laren. He added that the division is stressing the need for more suggestions which save time or material.

Mac Laren noted an increase in maximum awards within the division last year. In 1984 Packard Electric had four \$10,000 and four \$20,000 awards compared with only three maximum awards in 1983.

The combination of factors outlined by Mac Laren was responsible for an increase in the number of suggestions submitted throughout the division from 8,600 in 1983 to 14,830 last year. "That is a significant jump in volume." He noted about 47 percent of Packard's employes participated in the suggestion program last year—an increase from about 32 percent participation in 1983. Mac Laren figured the division's suggestion activity last year represented about 400 salaried and about 900 hourly Packard employes per month submitting suggestions. "This shows a big interest in the program."

Mississippi suggestion plan

Last year was also a successful suggestion year specifically for Packard's Mississippi Operations. The division's Clinton plants, the only Mississippi Packard plants which participate in the General Motors Suggestion Plan, posted savings to the division of \$631,000 last year; a 92 percent increase over 1983.

Ira Singleton, suggestion plan coordinator for Clinton, added that Packard's Clinton plants also increased the amount of award money paid to employes to \$120,000; a 90 percent

(Continued on Page 2)

CARS: A driving information force

by Patricia Reilly

You're socializing at a party or chatting with your landlord. Perhaps you're shooting the breeze with a Packard Electric supplier or customer. Or maybe you're paging through a business or trade journal.

What do these situations have in ommon?

relative to our competitors."

Employes can determine what kind of information Packard would find useful by considering what products the division makes, according to Al Vazquez, market analyst. Thus, some areas of interest to the CARS program include: connectors, terminals, wire and cable, final assemblies, ignition



For alert employes these represent opportunities to gain business-related information for Packard's CARS (Competitor Archive Retrieval System).

Through this program marketing and business planning staff members can analyze the division's competitive position by seeing it as a jigsaw puzzle, with CARS providing the pieces which will create an accurate picture of the competition.

"Our purpose is to obtain information about our competitors and to put hat information into a form useful to management," said Scott Bailey, Marketing manager. "Given the importance of being competitive in the marketplace, it's imperative that we understand just what 'competitive' is, products and printed circuits.

"Any piece of information could be the key that allows us to put the puzzle together," said Bailey. "A piece of information in and of itself might not seem very significant, but it may allow us to complete a picture and draw a conclusion, or verify something we weren't sure about."

None of this could occur without the input of Packard Electric employes and retirees who listen or look for useful bits of information and pass these along to the marketing staff via CARS. At first much of the information had come from the Marketing and Sales staffs. Now, however, CARS is looking to expand its grassroots support.

(Continued on Page 6)

Al Vazquez (standing), market analyst, and Scott Bailey, Marketing manager, add information to Packard's Computer Archive Retrieval System (CARS).

Increased prescription

participation

An alternative contact procedure has been established for mail order prescription drugs for Packard Warren Operations employes and retirees due to an increase in phone calls to the participating mail order pharmacy.

Ohio residents may call toll free 800-222-8938. Pennsylvania residents may call 800-835-3333.

Covered subscribers may also write:

Metropolitan Life Insurance Co. Medi-Met Prescription Drugs Oneida County Industrial Park P.O. Box 3018

Utica, New York 13504

Attn: Mr. E. Heimers, Manager Include the subscriber's name, address and social security number when requesting envelopes. Enrollees in HMP receive their drug package through the HMP program and are not covered by the mail order program.

GM January sales up

GM dealers reported strong sales during the January 11-20 selling period. Sales of passenger cars and trucks totaled 136,356 units, a 10.9 percent increase over the same period last year. There were eight selling days this year versus nine selling days last year for the January 11-20 selling period.

Passenger car sales of 100,306 units exceeded last year's mark by 7.9 percent on a daily selling rate. Truck sales of 36,050 units were up 20 percent over last year. Both rates were the best for the period since 1979.

AT & T, EDS announce agreement

American Telephone and Telegraph (AT & T) and Electronic Data Systems (EDS), GM's whollyowned subsidiary, recently announced a seven-year agreement to jointly develop and market customized computers and communications systems. Details are not yet available.

Chevrolet's most popular engine

According to a report in the industry paper Ward's Automo-tive Report, Chevrolet's most popular engine in the 1984 model year was the 5.0-liter V-8. The 5.0-liter beat out the 2.0-liter four cylinder engine 453,135 to 403,885. The count is based on production through August 31, 1984.

High tech gas stations

Japan's Agency of Natural Resources and Energy, part of the Ministry of International Trade and Industry, has revealed plans to use service stations to provide drivers with electronic information, ranging from traffic conditions and weather reports to hotel room availability. When the program is in place, some 59,000 stations will have computer terminals displaying information.

Newsbriefs Brookhaven 'railroad' improves material flow

The Brookhaven plant's roller conveyor "railroad" is on track!

Chris Duda, general supervisor of Process Engineering at Brookhaven, has targeted this month for Packard's Brookhaven material handling roller conveyor system to be fully functional.

"It will service every department," claimed Duda.

The system is comprised of three separate but interconnected conveyor systems.

"One-half of the plant cuts exclusively instrument panel wires, and the other half of the plant (cuts) exclusively forward lamp," explained Duda. "On the instrument panel side there are two legs (conveyors) servicing one half of the plant. On the forward lamp side, because the material flow is different, we only need one leg to service that entire half."

Duda described the system as a network of roller conveyors located about a foot above the floor. The 18inch wide rollers, spaced about two inches apart, are driven by a chain. Tubs which are placed on the conveyor are delivered at about 35 feet per minute to the plant's two packout areas where the parts are weighed, labeled and banded. Lift trucks still deliver raw materials to the plant's work areas.

"It (conveyor) provides the ability for us to get the materials to the packout areas in a very expedient manner," said Ed Zuga, Brookhaven plant manager. "Now the operator who has finished preparing a cut lead to be shipped to Mexico can take the lead and deposit it on the roller conveyor permitting material flow to move to the packout areas on a continuous basis.

Duda stressed the importance that Brookhaven's Production Control department had in the design of the plant's conveyor system. "We talked with the lift truck operators, who are the people who deliver the raw material," he said. "We let them have a say in how to structure the system so it would be the least amount of problem to them."

He detailed a unique feature of the new conveyor system. Two gaps called



Resembling an amusement park ride, Brookhaven's new conveyor system stretches throughout the plant.

'shuttle cars' have been designed into the conveyor system to allow for pedestrian traffic within the plant. A third shuttle car allows for lift truck traffic. During times when no tubs are at the shuttle car locations the conveyor is open for pedestrians and lift trucks. When a tub is present at either location, a bell and a warning light are activated. The conveyor automatically shuttles across the gap. delivers the tub and then retracts.

"We want to make this system something people see as a benefit and not as a detriment," he explained. (Continued on Page 6)

Aggressive goals set for 1985

(Continued from Page 1)

increase over what was paid to Clinton employes in 1983.

He claimed the personal approach of weekly suggestion meetings held separately at Clinton's Plant 21 and 22 for the success of the suggestion program.

"I've tried to add personalism into

\$31,000 last year and I wouldn't be surprised if that doubles this year." What do you do for an encore after a record-breaking year for the sugges-tion program? Mac Laren feels the only way is up.

Division announces suggestion winners The division annually presents to Packard of more than \$824,000 for General Manager's Awards based on 1984, which equals savings per plant overall General Motors Suggestion employe of about \$1,430. • Placing second for the General Plan performance by Packard employes. The following Packard Manager's Award is Plant 3. Suggestions from Plant 3 generated savings locations will receive General Manager's Award plaques based on 1984 of more than \$601,000 to the division. • Plant 21 was the top plant in figures: • Plant 11 earned top honors for the Packard's Mississippi Operations in General Manager's Award for 1984 1984. Plant 21 provided suggestions among Packard's plants in the Warren resulting in savings to the division of more than \$239,000. Operations. Mac Laren, supervisor, Suggestion Plan, noted that Plant 11 Warren assembly operations was also achieved this top award in 1981 the top salaried group within the division for 1984. Suggestions from the and 1983. He added that Plant 11 also placed Warren assembly operations salaried first of all 17 Packard plants in highest employes saved the division more than total savings to the division. Sugges-\$651,000, or about \$1,933 in savings tions from Plant 11 resulted in savings per employe.

Packard Electric Cablegram

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Mark Rollinson, editor Michael Hissam, associate editor

Mississippi editors: Beth Magee, Clinton David Eckman, Brookhaven

Phone: 373-3029 GM Network 8-531-3029 the program," said Singleton

1985 suggestion goals Despite the record-breaking achievements posted by Packard Electric last year in the General Motors Suggestion Plan. Mac Laren is optimistic that 1985 will be even more successful.

"We're working towards an objective of \$9.1 million (total divisional savings)," said Mac Laren. "We plan to set new records in 1985.

Mac Laren estimated that the division will pay its employes about \$1.5 million in suggestion awards this year; an increase from \$1.1 million paid to Packard employes in 1984.

He added that he also expects Packard's incentive awards to increase based on the increase in award money to be paid to employes. "It grew to

Quality, competitiveness, growth

Reese sees challenges ahead for 1985

General Manager Elmer E. Reese is confident that backard Electric will chalk up another successful ear in 1985. In the following interview Reese iscusses the division's Five-Year Business Plan, uality, growth, technology and competitive hallenges and goals for the division in 1985 and wyond.

(ablegram: How do you expect the business at took in 1985 to shape up for Packard Electric acomparison with 1984?

Reese: We're looking forward to another high nume year. All of the indications in the corporate mecast and the industry forecast indicate that 1985 fill probably run volume-wise at about the same wel as 1984. We can expect our high volumes to mtinue.

lablegram: As we begin a new year, what mortant challenges still face this division?

leese: There are many challenges. Our customers re continually making us aware that we are not et competitive in the marketplace. Our objective stobecome marketbase priced with reward for value dded. We are pricing all of the new models in the rew car programs competitively at market based ming. The pressures that we feel are on the balance t our business — on the carry-over models. The ustomers are looking for price relief on that. The hallenge that we have is to manage that effectively, stisfy the customer and reduce our cost accordingly othat we can maintain a fair return on the business. (ablegram: What quality goals does Packard ave for this year?

teese: Our goal for 1985 is to have all of our parts 100 percent conformance to the design pecifications. Our longer-term goal is to become ford Class by 1988. That means every one of the opponents that Packard supplies and every opponent in the vehicle is the best in the world. hat's what World Class is all about.

The second quality goal concerns quality of work the We're very concerned about our people's quality twork life. We will continue to project our programs and our training in the quality of work life with the employe participation groups. On the training the, SPC is an ongoing program, the quality approvement program has been identified and we've apointed a quality council made up of myself and the executive committee. If there's anyone in this ivision who thinks that the top management of ackard Electric and I personally are not interested uquality they're dead wrong!

lablegram: You've discussed the division's mality goals. How do you see Packard's goals fitting



Reese

into the corporate quality picture?

Reese: Our president (GM President F. James McDonald) has said that (quality) is the number one operating priority in General Motors. There's absolutely no question in our minds that the consumer, the individual who buys the automobile, their perception of General Motors' quality is a cut below particularly the foreign competitors. We've worked very diligently on that in the corporation, and we've certainly closed the gap considerably.

As a component division we've got to support the corporation. Every one of the parts of a car has to be done right. All the consumer knows is that he has a problem with the car — it doesn't start, it doesn't run or the lights don't go on. When you look at Packard's responsibility; if you view the wiring system as the nerve center or the energy system of the vehicle, we've got tremendous

responsibilities lying on our shoulders. The quality of that wiring assembly has to be World Class. There's just no other way!

Cablegram: What growth can be expected for Packard Electric in 1985 and beyond?

Reese: We've had significant growth recently. We don't see any end to the application of electronics in the automobile. It's just additional content for Packard Electric and wiring assemblies. In addition we have non-allied business at Chrysler, Volkswagen and the GM-Toyota TVX project. That's all new business to Packard Electric. And that's new business not only for our partners in Mexico but also Mississippi and Warren on the component side of the house. The growth is there!

You get growth through two branches. One is penetrating or creating additional markets with

(Continued on Page 7)



personally are not interested in quality they're dead wrong!"

Team approach to problem solving Teams identifying problems and solutions

by Mark Rollinson and Patricia Reilly

Packard Electric's Quality Improvement Plan is designed to attain the quality goals established for the division according to Bill Wehmer, director of Reliability and Quality Control. These goals include a significant reduction in field warranty problems by the 1988 model year, and 100 percent conformance to specifications by December.

In this, the second in a series outlining Packard's Quality Improvement Plan, the **Cablegram** focuses on the quality action teams involved in divisional product-related problems including bulbs, crossed wires, misidentification and product damage.

The **Cablegram** will complete its series on Packard's Quality Improvement Plan in the next issue by focusing on the divisional systems-related action teams—Cooperative Involvement, Just-In-Time (JIT) inventory, Statistical Process Control (SPC) and suppliers.

This pump handle lock (right) represents a typical Packard product damage problem. Efforts from the product damage action team are leading to a redesign of the part.

Bulbs

Most people who own a car will someday experience a nonfunctional bulb. It's to be expected. Bulbs are not guaranteed for the lifetime of the car. Eventually they burn out and need to be replaced. But what if it's your brand new car?

Jack Williams, general director of Packard's Mexican Operations, does not believe new cars should have bulb failures.

He noted that he became the owner of the Quality Improvement Plan bulbs action team because Packard's Mexican Operations install more bulbs than anywhere else in the division.

How much of a concern are bulbs to Packard Electric? According to Williams the fact that Packard is focusing on bulbs as one of the division's eight product-related Quality Improvement Plan areas is proof that bulbs represent a major concern. "It's a chronic problem (area) and we've had these problems for a long time."

Jerry DeSalvo, supervisor, Manufacturing Component liaison and a member of the bulbs action team, estimated that bulb-related warranty claims for 1984 model vehicles cost the corporation more than \$1.8 million.



Crossed Wires

Historically, any reference to "crossed wires" raises negative images. Metaphorically, "crossed wires" is wrong information or misdirection.

Crossed wires also raise negative images at Packard Electric. The



Dunham

difference is that crossed wires at Packard Electric are not just a figure of speech—they are real and they result in unsatisfied customers.

Bill Dunham, manager of Industrial Engineering, heads the crossed wires action team of the division's Quality Improvement Plan. He is working on the elimination of crossed wires as a Packard Electric quality problem.

"The crossed wires problem is related to our harness assembly operations," Dunham noted. "It falls within my area of responsibility to become involved if something is not working properly from a systems standpoint or an equipment (tooling) standpoint.' Just as other action teams involved in the Quality Improvement Plan, the crossed wires action team has a goal. "Our goal for crossed wires is zero defects." Dunham explained that his team had to establish a goal of zero because crossed wires are some of the most difficult problems to detect if they get to the customer. He added that crossed wires can result in extensive repair if they become assembled into a vehicle.

Misidentification

A rose by any other name may smell as sweet, but Packard Electric products labeled with the wrong names cause nothing but annoyance for the customer.

Misidentification remains a problem serious enough to warrant its own action team under the Quality Improvement Plan. Production/ Materials Control Manager George Sletvold, owner of the team, said its two-fold mission is to drastically improve or eliminate the incidence rate of misidentification, and to develop a World-Class quality identification system.

"Misidentification is defined as a container whose contents do not match the label on the outside, or a container that has mixed parts," he said.

For the 1984 model year Packard Electric had a misidentification incidence rate of 360 per million, according to Sletvold.

Attacking the problem

"Our goal is to have eliminated misidentification as a source of aggravation to our allied customers by the 1988 model year," he added. "We're shooting for zero per million."

The team is directing its efforts toward allied (General Motors) customers in order to take advantage of systems compatibility and already established relationships. This will help Packard gain information that will allow the action team to complete



Product Damage

Producing World-Class quality products does not benefit Packard Electric if something damages those products before they get to the customer.

Helping to find ways to prevent product damage is the job of the product damage action team under the Quality Improvement Plan.



Anderson

"Our purpose is to identify and implement corrective actions for those conditions which cause properly made parts to become unacceptable in the course of handling, shipping, storage or use," said Dale Anderson, director, Quality Control, and owner of the product damage action team. "The scope of the problem is not limited to activity within Packard, but also encompasses the shipper, General Motors Assembly Division and the vehicle dealer."

Product damage refers to parts

Williams

Williams outlined some of the areas of concern relating to bulbs that his action team is dealing with. He noted that some bulbs received from vendors may not be dimensionally correct causing them to not work.

"We act as a filter," explained Williams. "We light and test all the (Continued on Page 5) In order for Packard Electric to rid itself of the crossed wires quality problem, according to Dunham, two objectives must be met.

"First, we need to get the division (Continued from Page 5)

Sletvold

its analysis of the misidentification problem.

"The focal point of the group is primarily on the finished product that (Continued on Page 5) which become unacceptable after Packard Electric produces them. An improperly made part is not considered a damaged product for the purposes of this quality action team, according to Anderson.

"The importance of product damage is that it applies to everything we do," he said. "All of our products are subject to product damage in one fashion or another."

Cost of product damage Packard Electric currently experiences approximately 213,000 incidents of product damage per million vehicles at the assembly division level. These 213,000 incidents represent 46 percent of the quality problems GMAD has with Packard (Continued on Page 8)

Bulbs

(Continued from Page 4) dbs as they are installed in the ring harness." He noted that the 100 went bulb testing is built right into easembly process.

"As we (Packard) handle the bulb, sembling it to a wiring harness we n damage the bulb or disassemble "Williams said. He added that mage to a bulb can take place when messes are packaged at Packard mts for shipment to the various tomobile assembly plants.

Williams also noted that an portunity for damage to bulbs exists in Packard harnesses are placed

into the vehicles at assembly plants. The goal

"One of our goals is to prove to our customer, General Motors, that we can produce a zero defect installation of bulbs," said Williams. "If we're successful we should be close to (becoming) 100 percent installer of bulbs, which is added business for Packard."

The solution

Solving the division's bulb problems, according to Williams, will take a concerted effort on the part of the bulb vendors, Packard Electric which purchases, tests and assembles the bulbs and the GM assembly plants where the Packard harnesses are placed into cars. "There have been a lot of studies conducted at the car divisions by way of PEP (Product Evaluation Program) studies. We have actually run studies at dealers to find out how big the problem is," explained Williams.

"The data indicates that we're (Packard) going to have to do some significant design work on both the lamp sockets and the metal terminals that mate with the bulb to get the reliability we need in an 'as assembled' vehicle."

He added that as a result of Packard's studies, the division will also recommend changes to various vendors on the design of the bulb.

The team Serving on the bulbs action team are

Crossed Wires

(Continued from Page 4)

converted to electronic testing. Secondly, we need everyone in the division to adhere to (product, quality control and method) specifications."

Dunham's team assigned itself the task of determining an implementation plan for continuing to convert the division to all electronic testing in the final assembly business.

He noted the new electronic testing system, developed by Packard within the last three years, is 100 percent effective in detecting defects. "It's state of the art," said Dunham.

of the art," said Dunham. Packard's Electrical Test Tool Engineering group has design and development responsibility for electronic testing throughout the division.

According to Dunham, Packard's electronic testing will enable the division to build additional reliability into its products, and to simplify engineering changes. It is also Jerry DeSalvo, supervisor-Manufacturing Component liaison, Bob Johnson, manager of Manufacturing Services, Dale Johnson, manager of Reliability and Quality Assurance, and Bob Saviers, superintendent, Quality Control and Reliability.

Williams noted that the action team will be expanded to include at least one vendor and a material handling representative from GM's car assembly divisions.

He explained that his team may also include additional Packard representatives. "As we get into the recommended design changes we'll probably need significant design input — both from our product design and then from our tooling design people."

significantly faster than the electromechanical stepper switch which is being phased out of use throughout the division.

"As our products have become more complex we've had to develop up to 1000 point test units in order to cover the product lines that we're developing today," claimed Dunham. The first electronic testing units used at Packard were designed to test only 250 and 500 points. The 1000 point test units will find initial use in the 1986 GM E-K car wiring systems.

The crossed wires action team has convinced the division of the virtues of the new electronic testing equipment, according to Dunham. He added, in fact, that beginning this year all new vehicles such as the "N" car (GM 20), "M" van (GM 40) and all new future vehicles will be electronically tested by Packard. The division is also expanding the use of electronic testing to some existing product testing lines.

"For 1986 model start of production we're probably about 50 percent converted," said Dunham. He (Continued on Page 7)



Charlie Brown (left), electrical engineer in Clinton's Master Board area, assists Carol Butler, Master Board supervisor, in connecting a 1986 E-K harness to a 1000 point electronic testing unit.

Misidentification

(Continued from Page 4)

eaves the division," Sletvold aplained. "However, there are many neidences of material being mproperly identified for internal use. Depending on our success in diminating out-the-door incidents, we may shift our focus to the internal problems as well."

Packard Electric learns of misidentification problems when ustomers file formal complaints. This highlights the incidents as they occur. Sletvold pointed out that such incidents can cause dramatic problems when customers do not discover the improper labeling until they are ready to use the product.

"It's a subtle problem, but it's a source of embarrassment and aggravation," he said. "It's tough to identify what really went wrong to cause any given incident."

Causes and solutions

The misidentification problem lacks a single root cause. Sletvold listed the most common contributing factor as human error: lack of attention, mfamiliarity with proper procedure and unawareness of the importance of correctly labeling containers. Potential solutions to these problems include: streamlining procedures increasing employe awareness levels • developing a formal training program · limiting the number of people responsible for labeling "Plant 12 has initiated a program where the production operator who produces the product is also rsponsible for labeling the container," Sletvold said. "We need to do more of these things on a broader basis." In addition to this program the action team is currently gathering and

analyzing information to develop strategies which will begin eliminating misidentification as a problem for Packard Electric. This will set direction for solving the problem as a whole.

Members of the action team include Sletvold; Joe Brigido, superintendent, Quality Control; Carol Essad, GMPCP auditor; Tom Shepherd, Purchasing administrator (Product); Jack Tomerlin, Material Management Systems and Bob Ward, general supervisor, Quality Control.

Future identification system

"We also have formed a group to work on the identification system of the future," he said. "We are going to design a World-Class identification system and pilot implementation in Plant 15's battery line."

This World-Class identification system will implement such ideas as elimination of nonstandard labels and the printing of labels as they are needed. Members of this group include Jim Besse, supervisor, Production Control; Jim Flanagan, manager, Plant 15; Shepherd; Bob Stassinis, Plant 15 general manager; Tomerlin; rts, general super tomer Service; Jerry Hammar, industrial engineer; Walt Johnson, Material Handling; Adrian Mangino, supervisor, Quality Control; Mark Schaefer, Layout engineer, Ward, and Norb Zawacki, senior Material Handling engineer. Sletvold said Packard's Mexican Operations tend to have a lower incidence rate of misidentification than the Warren Operations.



"Anything we develop that works in Warren can improve all our operations," he added, "but we are concentrating our energies in Warren."

Concluded Sletvold, "As far as labeling is concerned, it's either right or it's wrong — and when it's wrong it's painful."

Richard Black, Dept. 1719 extruder operator, labels a container of flame retardant material as his machine produces it. Previously, inspectors labeled these containers. Product labeling by operators has resulted in a significant reduction in misidentification.

CARS channels competitor information

"One of the reasons we needed to expand is that we've received a limited spectrum of information, and it wasn't enough," explained Vazquez. "We need to emphasize that every employe of Packard Electric is a potential source of information. We set up the CARS system to encourage input from throughout the division."

Employes and retirees can contribute information to CARS by a variety of means:

• mail the information on a CARS competitor information sheet, which is form F-1862-1 available through office supply

• using P2S2 local application "hotline"

• phoning PAX 4080

• writing or copying the information and sending it to Marketing, Sta. 40B, Warren, Ohio 44486. Because Packard Electric competes in a specialized industry, employes who deal with the outside world while at work have a greater likelihood of obtaining valuable information.

On the other hand, "we have gotten some completely unexpected contributions," Bailey pointed out. "For example, one individual's landlord happened to be a release engineer for another company. He very openly told one of our employes what competitors his company is considering for supplies of wiring assemblies."

Such information is useful, to be sure, but is it legal to gather it?

"Virtually any source that doesn't violate anti-trust regulations is legitimate," Bailey said. "We can't go out and talk to our competitors directly about what their plans are, but antitrust regulations are relatively general. They allow you to gain almost any knowledge about your competition as long as you don't break any laws we don't need employes to strong-arm people or to dig for information."

Many times employes will receive competitive information simply by being aware.

Jim Miller, Divisional Manufacturing Engineering, was working with one of Packard's vendors when he learned that a Packard Electric competitor had placed a big order for new cutting equipment. Previously the competitor had indicated they might be phasing out of the wiring business, so Miller's information altered Packard's view of the competitor's intentions. Ultimately, it enabled Packard to more effectively direct sales efforts.

Vazquez pointed to another example in which Glenn Reeser, director, Mississippi Operations, spotted an indepth article on one of Packard's competitors in a local newspaper. Reeser sent the item to CARS, and the item provided a wealth of information on the company.

Employes from Packard's Mexican Operations have also contributed information concerning such things as competitors' equipment, quality control procedures, number of employes and turnover rate.

"If we can accurately predict their marketing plans, we can better formulate our strategy."

Bailey compares Packard Electric's CARS program to a sports team which is scouting a competing team. "We're trying to compete as best we can," he said. "We need to understand what our competition is capable of. We're not trying to fix the game, nor is it *legal* to fix the game."

Brookhaven plant on the right track

(Continued from Page 2)

Duda considers better material flow and cost savings as direct benefits of the conveyor system to the Brookhaven plant.

He explained how the conveyor system will improve material flow within the plant. Raw materials such as cable and terminals are distributed to each department's "drop area." The raw materials are then processed through the department. As the tubs are filled with cut leads, they are inspected, released and placed on the conveyor.

"We're going for \$150,000 a year (savings)," Duda said. "This is less than a two year payback which is how we justify the system."

Zuga expects the conveyor system to result in an immediate improvement in safety, housekeeping and material flow. "This is another attempt by Brookhaven to streamline the lead manufacturing operation to make us so good that our customers can't do without us."







Chris Duda, (above) general supervisor of Process Engineering at Brookhaven, stands on a pedestrian bridge crossing over the plant's conveyor. Pat Adams, (upper right) Brookhaven inspector, demonstrates how tubs are loaded onto the conveyor system. At right, Duda examines material at one of the plant's packout areas. 5

GM executive discusses Packard quality

lonald H. McPherson, GM vice president in arge of Quality and Reliability, recently visited ckard Electric's Warren Operations. The blegram conducted the following interview:

blegram: What has General Motors gained mits investment in and emphasis on quality?

Pherson: I think you have to look at quality the basis of if you don't have it you don't get at market share—you don't hold it, you don't rease it and without it you're no place in the at the present time has my choices to make when he's buying a vehicle me domestic, some foreign, most all of them pretty of. Without quality you really can't compete in emarketplace.

ablegram: What has happened in the car buyers' meptions of American versus Japanese products d, more specifically, what about perceptions of Wauto quality?

ePherson: I think you have to go back to the 5 time frame when the Japanese came in at the st oil crisis. The public started to buy their rducts. The public recognized that they had fit d finish and reliability superior to what the mestics had. That set the stage in the public mind at domestics had to improve. In the process tween 1975 and 1984 we've made tremendous ides. Frankly, we're not quite up to some of the mpetition. But we're almost there in the fit and ash area. I think we're doing remarkably well. some of the interfaces we have to improve and are are a lot of programs underway to do that.

ablegram: What are your feelings about Packard actic's efforts to improve the quality of its ducts?

Pherson: Packard Electric is in a very unusual mation. They are a 'connector.' They connect tween something that you provide an input to ad where something has to happen at the other d. When the customer gets that input that doesn't wk, he doesn't necessarily blame Packard Electric. blames the piece at the other end or the piece this end. My experience in the last few years is that Packard has made tremendous strides in providing that interface in a much more reliable manner than has been done in the past. There have been some great improvements made.

Cablegram: We have seen much progression with the SPC principles at Packard Electric. Why should employes look at the division's and the corporation's support of SPC as an opportunity?

McPherson: If you're not competitive—if you don't have the quality level that you must have to be competitive, there are no jobs for anybody. SPC is nothing more than a fairly simple tool to make sure that the operation is under control. If the product is under control then you've got a chance to make some changes if necessary to make that product work and then have a quality product at the end of the line. It's an absolutely essential tool for all of us to stay in business.

Cablegram: What are some examples of GM management decisions and actions which support the corporation's quality ethic and quality goals?

McPherson: I think you have to look at the three biggest areas of customer dissatisfaction. That's engines and engine controls, transmissions and transmission controls and electrical. The biggest customer complaint is engines. We have moved ahead of quite a bit of our competition including a lot of the Japanese in reliability of the engines and controls in the last two or three years. That's been the result of a very concentrated effort to solve those problems.

In the transmission area we've made great improvements in durability. It has been mainly in the last year that we have shown significant improvement.

The electrical area, in large part through the efforts of Packard Electric, is showing significant improvements, too.

Cablegram: Why would you term quality as the best cost reduction opportunity a division such as Packard Electric has?

McPherson: It's a very simple process. If you do it right the first time you don't spend all that money

to inspect it, repair it or scrap it. It's much cheaper to do it right the first time and only do it once. That not only holds true for the manufacturing end of the business, but that holds true for engineering, the sales department with handling orders, and even the financial department. Everybody has to do it right the first time.



McPherson

Cablegram: You are learning about Packard's plans to improve quality. What message do you have for the division?

McPherson: What I have seen of the Packard operation is most impressive. What I see going on here is that everything is definitely moving in the right direction—moving towards redesign for better reliability, reprocessing, conforming to specifications, doing it right the first time and building a quality product. I encourage everybody to keep doing exactly what I see them doing right now.

Reese expects busy 1985 for Packard

(Continued from Page 3)

tisting products and that is what we have done with Chrysler, Volkswagen and Toyota. There are one other significant markets that we're looking at particularly the Japanese companies that are asing their manufacturing operations here in the United States. We're going after that business.

The other growth aspect comes from diversificain of product. That doesn't happen overnight. With the concept of business planning and strategic lanning and the advent of the strategic business mits, we're seeing some very interesting new otential opportunities surfacing particularly out of ur New Products SBU.

hey're going to come on line because we certainly re going to diversify. This affords us some remendous opportunities for some growth.

Cablegram: Up to now we've been looking at the werall division. What can we expect to see happening in Packard's Mississippi Operations this year?

Reese: First of all, Mississippi is doing a fine job. heir performance has been excellent through 1984 and they're continuing that fine performance going into 1985. Mississippi will still have some assembly perations and it is their intent to totally get out if that business and get into components and lead rep. With the volumes being what they are affecting he total division, specifically Mississippi, it's created a significant volume increase not only on the Mississippi Operations but also on the Mississippi appliers. They're going to be busy.

Cablegram: Packard Electric is on the leading edge of wiring harness technology. How will the division maintain that industry position in 1985 and beyond?

Reese: Packard Electric is recognized as the leader in technology of wiring systems in the automobile worldwide. No question about it. Our challenge is to maintain that leadership. And we can't maintain it by standing still. We've got to make investments in the future. We've got to make investments in advanced engineering, not just in product but in process also. Simultaneous engineering . . . processes developed that are capable; new technology. That technology is being driven by electronics on the automobile. We have to be ready for that. We have to be ready for the future wiring systems. We have to be multiplexing. We've got to be on top of that technology. We have proven our leadership in electromagnetic compatibility. As we put these additional electronic components on (the car) that transmit and receive all these signals we've got to make sure that those signals are managed. Product, process and management technology. What the division is driving at is strategic management.

Cablegram: How is Packard Electric doing with respect to its Five-Year Business Plan? Are we on



Reese

working tool that has to be constantly monitored and revised to recognize the situation as it exists at that moment. We're living in a very dynamic environment. The factors which influence our strategies are changing every day. We've got to continually make sure our strategies are congruent with what's good today. We're doing that constantly. Thus far we are right on track with our business plan. Our challenge is to be on track going forward and to earn a fair return for the corporation.

target?

Reese: We're right on target as far as the business plan. Our mission statement has been developed and we've got our strategies and objectives in place. A business plan is not a static thing. It's a dynamic

Crossed Wires

(Continued from Page 5) redicted about 75 to 80 percent inversion to electronic testing for Packard by the 1988 model year.

System analysis

The crossed wires action team also ssigned itself the task of surveying ach of Packard's operating locations with special attention to operating hilosophies, maintenance, handling if repairs and each plant's conformance to method and quality control procedures.

"It's a gap analysis on conveyors and stationary boards which includes how electronic testing and control procedures and specifications function together as a total system," said Dunham. "This guarantees that we don't let any crossed wires get to our customers."

Benefitting from the overall structure of the Packard Quality Improvement Plan, he mentioned that his crossed wires action team has been working closely with the unseated terminals action team.

"An unseated terminal can result in a crossed wire by being reseated after electrical tests (conducted at Packard plants)," Dunham said. "This is an electrical defect." He added that incorrect reseating can also occur at the customers' assembly plants.

"Anytime we find that an unseated terminal is a problem contributing to either crossed wires or misindexed wires, we pass that information on to the unseated terminals group." The crossed wires action team members are: Luis Baca, manager of Conductores; Al Beck, superintendent of Packard's outside supplier program in Mexico; Joe Brigido, superintendent of Quality Control; Dino De Falco, Cableados plant manager; Patricia Fuller, supervisor of Reliability; Mary Pat Meade, superintendent of divisional Methods Lab; Paul Romer, superintendent of the Hubbard plant; Dave Starr, supervisor of Packard's outside supplier program and Austin Scudieri, supervisor of Reliability.

Saturn: New car, new concept

General Motors recently announced the addition of a new operating unit-Saturn-to its passenger car divisions. GM Chairman Roger B. Smith said a separate company is necessary because the different technology, systems and organization developed by Project Saturn will require a new structure distinct from GM's other automobile operations.

Initially, two models, a 4-door sedan and 2-door coupe, are expected to be produced. The cars will be smaller and lighter than present GM J-cars, but with comparable interior room.

With all-new engines and transmissions, the cars will be fuel efficient. Both an automatic and an advanced five-speed manual transmission will be available.



Saturn interior will have comparable space to current GM "J" car subcompacts.



Project Saturn was established in 1982 to explore alternative approaches to building small cars competitively in the U.S.



Product Damage

(Continued from Page 4) products. The action team hopes to reduce this figure to 24,700 per million vehicles by the 1988 model year.

We are coming to understand where the damage occurs, and to quantify how much is occurring within Packard and how much within GMAD,' Anderson explained.

Obtaining such information from GMAD will require the product damage action team to work closely with Reliability's cooperative involvement group. The team is considering running a specific Product Evaluation Program (PEP) study with a focus on product damage.

"Internally we are using the quality index and Quality Control's product audit as sources of information," Anderson added. "Specific data is an important tool for focusing our efforts."

The product damage quality problem is complicated by the fact that damage to Packard parts has the potential to occur at any point in a part's journey from its original manufacture to its final installation in a vehicle. This has caused the action team to formulate a strategy which involves determining where damage is caused and where corrective action could be implemented.

Attacking the problem

"Our root cause analysis is breaking

assembly plants by reliability vehicle coordinators.

Product damage caused by the design of the part is seen when these parts are regularly damaged in the course of normal handling, transport and use. The team may recommend redesign of certain parts or replacement with a different type of part.

"Almost everyone who works at Packard Electric knows of examples of product damage," Anderson stated "For example, most people know that nylon parts become brittle and break in the winter. That's a classic example of product damage. It isn't a simple problem to solve, but it's an item that has to be dealt with if we're going to reduce product damage."

Small group action teams will focus attention on different facets of the product damage problem. These include:

Packaging and material handling, led by Denny Reicher, superintendent, Plant Layout.
Harness assembly activity, headed by Jim Ehrhardt, Idaded by Jim Ehrhardt, Ji

superintendent, Methods Lab, Mexican Operations.

• Shipping, handling, materials management and transportation, led by Bob Schon, superintendent, Material Control.

• Vehicle assembly plant use and data collection, led by Jerry Gilley, superintendent, Reliability. • Product Design, led by Marty



Learn how... 1. Pull

Pull the pin. Some units require the releasing of a lock latch, pressing a puncture lever, or

2 Aim

Aim the extinguisher nozzle (horn or hose) at the base of the fire.

3. Squeeze

Squeeze or press the handle.



Sweep from side to side at the base of the fire. Watch for reflash. Discharge the contents of the extinguisher.

fuse boxes, conductors, and electrical sources require an extinguisher labeled 'C'.

A fire extinguisher is a storage container for an agent like water or chemicals. It is designed to put out small fires, not big ones.

Extinguishers are labeled A-B-C according to whether the fire on which it is to be used occurs in wood or cloth, flammable liquids, or electrical equipment.

Fire extinguishers where you work . . .

It is management's job to have extinguishers available for use - and your job to know how they work.

You need an extinguisher at home . . .

If you plan to buy one extinguisher for your home, a multi-purpose dry chemical labeled ABC puts out most types of fires - wood, paper and cloth, flammable liquids, or electrical fires.



you buy more than one, you might want to get a BC for the kitchen, a A for the living room, and an ABC for the basement and garage.



down the information into causes associated with the assembly plant and causes which are internal to Packard," he said. "There are then three major thrusts to attacking the problem: an internal, an external and a design thrust."

Product damage caused within Packard can result when a part is walked on, run over, dropped or crushed. To combat this, the team is evaluating the division's handling, transporting, packaging and use of components and wiring assemblies.

Product damage caused outside the division results while parts are shipped, removed from containers, tested, installed or repaired. The team intends to build on the foundation already being established with the Zofko, assistant staff engineer, Component Engineering.

These team leaders, along with Anderson and Dan Lazor, superintendent, Quality Control, currently make up the product damage quality improvement action team.

"We know that our team, along with other quality improvement plan teams, will have to add C-P-C and or B-O-C vehicle assembly plant representatives to our teams," said Anderson. "We are currently determining who those people should

"We expect to make a significant contribution to Packard's drive to World-Class quality," Anderson concluded.