



1994 AWARD WINNER

DANA CORPORATION - COLUMBIA, MISSOURI

It's evident when you visit Dana's Columbia, Missouri assembly facility that it's not a traditional auto parts plant. There are no time clocks. Every person is salaried. Questionnaires with the headline, "What do you think?" ask you to write Woody Morcott, the Dana Corporation CEO, about concerns. Suggestion forms solicit ideas about improvement. A computer terminal informs technicians about the status of their suggestions and training. T.V. screens flash customer schedules and shipments, daily quality and productivity figures, inventory levels, 401K fund prices, Dana's stock price, hazardous waste reduction results, birthdays, and gainsharing payouts. If you have O+ blood you can contact Cindy at the front desk about donating a pint of blood for one of Columbia's ailing co-workers.

AN OVERVIEW

Dana Corporation's Columbia, Missouri facility assembles automotive drivetrain components for Ford and Isuzu. Columbia's 185 technicians assemble the front driving axles for the popular Ford Explorer, Ranger,



Bronco, F-150 and 250 Trucks, the Aerostar 4WD van, and they assemble the rear axle for the Isuzu Rodeo. The 1994 projected sales for Columbia are \$250 million.

The Columbia, Missouri location is one of six Spicer Axle Division facilities. Dana's Spicer Axle Division is one of the largest independent manufacturers of driving axles in the world and is Dana's largest division. The 1994 sales will exceed one billion dollars for the second year in a row.

Dana Corporation was founded in 1904. Its world headquarters are based in Toledo, Ohio. Dana operates facilities in 27 countries with more than 36,000 people and had sales of \$5.5 billion in 1993. Dana, a *Fortune 100* company, is recognized for its decentralized style of management and people involvement.

THE DANA STYLE OF MANAGEMENT

The Columbia assembly plant reflects the beliefs of Dana Corporation and its style of management. These beliefs are stated in a one page "Philosophy and Policies of Dana." The Dana Style of Management can best be summarized in these ten key thoughts:

- Dana people serve the shareholder
- Dana people are our most important asset
- Dana people accept only total quality
- Dana people discourage centralization
- Dana people do what's best for all of Dana
- Dana people participate and innovate
- Dana people compete globally
- Dana people focus on the customer
- Dana people communicate fully
- Dana people are good utilizers

CUSTOMER FOCUS AND SATISFACTION

Customer improvement toward total quality is the objective and responsibility of every Dana person. The ultimate measurement is a totally satisfied customer. Continuous improvement means eliminating all waste, doing every job right the first time, and involving all people in the total quality process.

When a Ford plant runs low on axles, Ford doesn't order more parts--Dana does! Several times a day Dana Columbia dials into Ford's mainframe computer. They determine how many parts are on hand. If more axles are needed, Dana schedules the material. This keeps Ford's just-in-time line processes running smoothly.

Paperless payables and receivables are other examples of waste elimination and improved customer service. Columbia is paid for axles based on bar coded receipts at their customers. Conversely, Columbia pays its suppliers based on bar coded receipts. This has eliminated the preparation and mailing of paper invoices.

When the Columbia facility was awarded the Isuzu rear axle business, they formed a cross function team that was responsible for the first axle shipments. After visiting the Lafayette, Indiana Isuzu assembly line they were determined to ship axles that were technically and operationally sound. The previous supplier's highest warranty claims involved their anti lock braking system. The Columbia technicians decided that each axle that Columbia built needed to go through a braking system check. These positive steps eliminated the problem. There have been no axles returned for anti lock braking problems.



RESULTS

Columbia technicians' efforts have paid off as well. Quality has improved each year. The 1993 customer rejects were 33 parts per million and 1994 is trending even lower. Technicians have improved productivity 5% in each of the last four years. Columbia has 100% participation in its suggestion system averaging more than 20 suggestions per person every year. Inventory levels are truly just-in-time averaging just four days or 1.7% of sales. Columbia received Ford's Q-1 award in their first year of eligibility. They were also the first Spicer Axle Division Facility to supply axles to an international customer.

This has resulted in a 35% sales increase to Ford in 1994. Projected sales increases for 1995 are 21%. Sales to Isuzu this year will exceed 100,000 axles.

For more information, contact:

Jon Vitaniemi, Quality Manager
Dana Corporation
2400 Lemone Industrial Blvd.
Columbia, MO 65201
Phone: (314) 449-0188
FAX: (314) 875-0395