Ryobi Small Engines: Quality Planning

Description

Ryobi Outdoor Products, an organization that makes home maintenance equipment, e.g., trimmers and mowers, faced a tough challenge: to design its products to comply with California's tough new anti-pollution laws. Their story is a classic example of how to use a structured quality planning process to develop a far superior product. When California announced its tough new anti-pollution laws, Ryobi's competitors spent their energies fighting "city hall," trying to get legislators to reverse the decision that would eliminate the significant pollution generated by two-cylinder engines. Two-cylinder engines were a target for regulators because the typical two-cylinder engine generates as much air pollution in two hours as is generated by an automobile traveling 3000 miles. In addition, the noise pollution is excessive. The competitors' lobbying efforts were unsuccessful. Meanwhile, a team of Ryobi employees (designers, engineers, production, sales, and marketing), in conjunction with Ryobi's key suppliers, broke new ground in pollution control. They developed, from scratch, a miniaturized four-cylinder engine in only ten months. The benefits of a four-cylinder engine are numerous:

- more complete, air-included combustion dramatically decreases air pollution
- significantly less noise
- easy starts
- no messy gas and oil mixtures

This accomplishment was astounding because the technology needed to create such an engine did not exist when the Ryobi team started to design the new product. No one ever thought it would be possible to create a four-cycle engine small enough to use in lawn equipment. The quality planning design team set out to meet the emissions standards developed by the Environmental Protection Agency (EPA). The EPA, a watchdog U.S. government agency, sets clean air, water, and other environmental standards for industries to follow. Through creative design and the use of sensitive environmental monitoring systems, the team was able to surpass the standards that will be imposed by the EPA in 1999! In the process of meeting tough performance and emissions standards, the team of Ryobi employees created the smallest, lightest four-cycle engine available for mass production and delivered it to their customers at a competitive price.

Learning Point

Using a structured quality planning process, a cross-functional team was capable of launching a technologically innovative product to provide superior performance and pollution control. Not only was Ryobi able to meet the tough standards of government regulators, it also delighted the consumer.

Discussion Questions

Question: How could a structured quality planning process help your organization provide superior products and services?

Answer: Quality planning helps to:

- identify the customers of the new good or service
- develop the good or service that will meet those needs most effectively
- develop a process that can deliver the good or service as it was designed, both effectively (with fewest deficiencies) and efficiently (with optimum resource consumption)

- develop process controls that will maintain the designed in quality
- transfer the process and its controls to those who will operate it on a routine basis

Question: Has your organization ever designed a new product with input and help from suppliers?

Answer: Most will not have involved suppliers in new product development. Probe: What are the benefits of involving a supplier in new product development?

Question: When has your company (or other companies which have come to your attention) tried to use government lobbying as a solution to solve a problem?

Answer: Responses will vary but may include the following.

- Many industries, e.g., steel, automobile, and electronics, have consumed considerable resources to keep foreign competition offshore by imposing high tariffs on imported goods. This tactic does not get at the root cause of the problem: providing high quality domestic products that consumers want to buy.
- Some industries will fight regulations on the safety and quality of its products, e.g., gun manufacturers. Instead of putting their energies and resources into lobbying, the money and time would be better spent on developing tough standards for product safety and quality.