

CHAPTER I

INTRODUCTION

1.1 Introduction

ABC as the automotive company is now known as the Japan Company, was founded in 1937. By that time, cars in Japan were almost all imported from makers such as Ford and G.M. In 1947, total production reached 1,000,000 vehicles. If we compare that figure to the present day, it seems extremely small indeed. In 1950, ABC company became an independent sales company, and until 1982, when integration was achieved, production and sales were carried out by two separate bodies with enormous growth over the years accumulated. In 1983, this figure jumped to 40,000,000. With this production figure (excluding production in Communist countries and foreign subsidiary companies) the company now ranks as second in line only GM in the world. In Japan, ABC is the top maker in both production and sales.

At present, ABC cars are highly popular with peoples from 140 countries throughout the world. ABC cars are delivered to customers through a network of 152 importers and distributors and 6,700 sales outlets. ABC cars are widely recognised throughout the world for their high quality and economy together with the substantial after service organisation which has been built up over the years. However, the accomplishments are not limited to ABC Company alone. Everyone belonging to the ABC Family; Importers, Distributors, Dealers and every one involved in the organisation of ABC sales channels has made an immense effort and contribution.

1.2 Statement of Problem

In the year 2004, ABC Company has introduced the new model of pick-up car, which called "V" model. The product positioning of "V" is in the low price (0.8 million bath) with high class utility. It persuaded customer with the image of low fuel consumption and comfortable riding car. The sale target of "V" was penetrated in the group of customer who has a medium income and need more than ordinary car.

Since ABC has introduced "V" model, the sale volume of "V" has increased continuously, until now the average sale, volume per month is on around 15,000 units/month, however since "V" model has been sold to customers. ABC Company has faced on many problems, which most of problem came from body system.

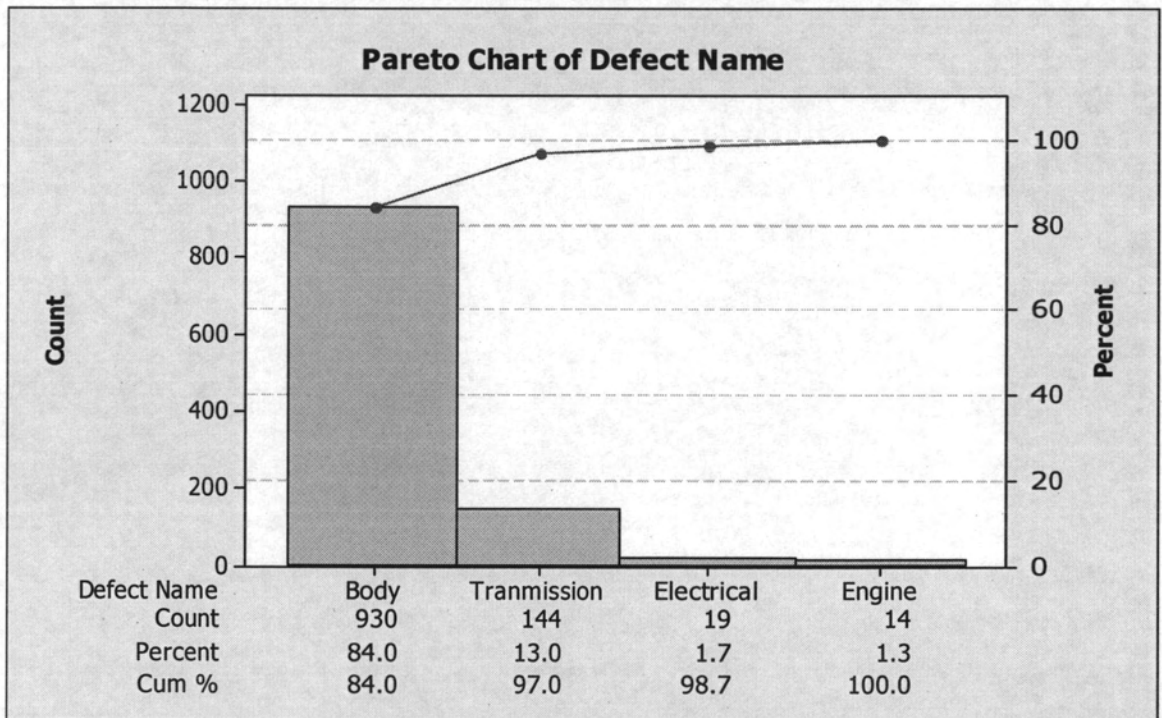


Figure 1.1 Classification of Problem by Vehicle's System

According to the figure 1, the vehicles can classify as 4 main systems.

1. Body System - including interior and exterior of vehicle.
2. Transmission System - relate to transfer and suspension system.
3. Electrical System - concern with wire harness and electrical part.
4. Engine System - combustion and ignition system is main subject.

From the Pareto Diagram, it could conclude that most of problem in "V" model has concerned with body system. The number on the right hand-side was shown overall body system defect cases which occurred totally 930 cases.

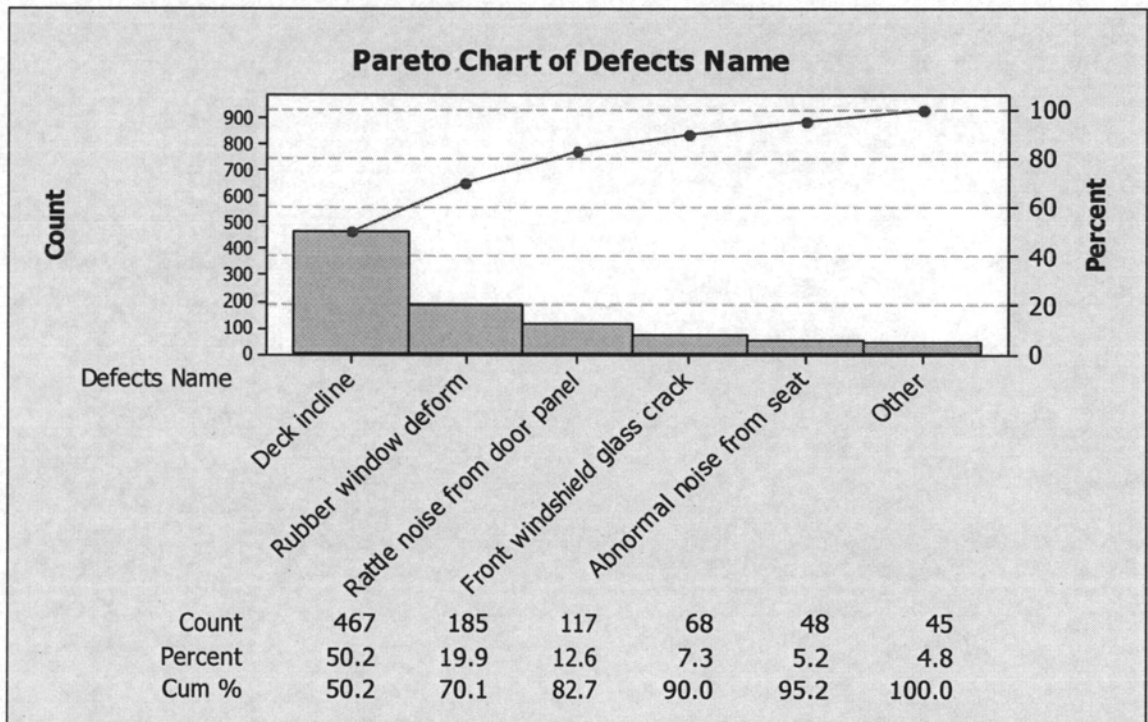


Figure 1.2 Problems Ranking in Body System (Nov'05)

According to the table as above, the first four problems were out of authorization of writer and all of them have already taken countermeasure which it was described in table. By the way, there was one remaining problem which it was abnormal noise from seat problem. The problem has not been solved yet and the problem was directly in responsible of writer.

However, inside body system, it could classify problem as many subjects. According to Pareto Diagram in figure 2, the problem of body system has divided in six major subjects, which depend on customer complaint. The fifth rank of problem, which occurred totally 48 cases (5.2 % of total), was abnormal noise from passenger's seat.

The severity of problem can classify into 3 rank.

Rank	Details
A	Safety problem or affected to customer life directly
B	Disturbance problem or affected to customer mind or usage
C	Appearance problem, mostly came from assembly

Table 1.1 Problem Ranking

Problem	Severity	C/M	Remark
Deck incline	B	Yes	- The problem has affected to appearance only. It doesn't concern with quality of product.
Rubber window deform	B	Yes	- Due to miss-installation of staff, this problem affected to appearance only (Human error).
Rattle noise from door panel	B	Yes	- Interior design error and easy to correct.
Front windshield glass crack	B	Yes	- Due to miscalculation of body design, this problem has been corrected by Japanese Designer
Abnormal noise from seat	B	None	- The problem was very disturbed and easily detected by customers. Until now, there was no correction for this problem.
Others	-	-	- Severity and Correction depend on the kind of problems

Table 1.2 Problem Description in body system

ABC company has faced on the problem of abnormal noise came from passenger's seat which problem has been complained and easily detected by customers usage. The abnormal noise has occurred when the vehicle was running on rough road in every speed and there was no loading condition on seat.

Not for so long, the company has investigated problem and collected data by surveying directly through customers and all of the vehicles in stock yard. The information has been gathered and summary which the purpose to correct problem as quick as possible.

The company would like to improve the product quality by regarding to customer satisfaction.

1.3 Objective of Study

Be able to reduce defective products which also prevent customer complain in after market.

1.4 Scope of Study

The study will focuses on the product of vehicle passenger's seat from production line and to cover on assembly line in automotive manufacturing.

- Study and improvement of Vehicle's seat product.
- The studied site is located in:
 - ABC Company
 - ABC's Supplier Company

1.5 Research Methodology

The study is carried out in the following steps:

1. Study theories and researches involving thesis.
2. Collect data relates to the defects.
3. Analyze data and information by using problem-solving method, quality improvement tools such as cause and effect diagram, relation diagram.
4. Suggest the countermeasure plan or alternatives for defective products reduction and monitoring process by process "FMEA" techniques.
5. Implement document and record in process and follow up.
6. Summary and Compare the result of quality improvement procedures.
7. Thesis write up and submission.

1.6 Expected Results

Once the study is completed and proposed solution is implemented, the following are expected positive consequences:

1. Reduce the defective product and save money and time.
2. Reduce the warranty claim data and increase customer satisfaction.
3. Be able to control quality of the product.