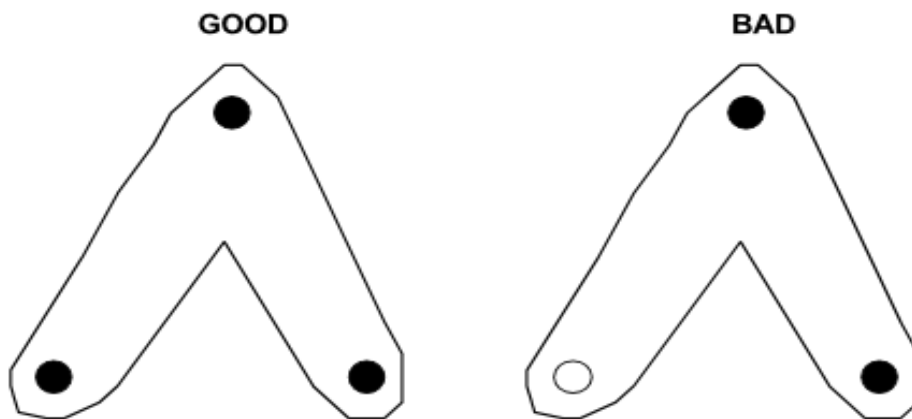


Case study : rivet missing at customer plant

Background

John Doe is the Quality Manager at XYZ Industries. XYZ is a component supplier that manufactures metal stampings and light assembly products. The company has a reputation for supplying high quality parts on a consistent basis. Seldom has there been a customer complaint. XYZ has Quality representatives called Customer Support Engineers (CSE's) at every customer assembly plant. The CSE's report any problems to John for investigation and follow-up.

At 7:00 a.m. this morning, John received a call from Janet, CSE at the Winding River Assembly Plant. Janet informed him that the customer had found five defective stabilizing brackets on second shift last night. She checked the remaining inventory and there were no defects in the remaining 326 pieces. The manufacturing sticker on the back of the brackets indicated that they were made by the second shift operator. Normally, the stabilizing bracket is fastened to the regulator motor with three rivets. The five defective brackets had only two rivets in them. The lower set of rivets on all five brackets was missing a rivet. This was the first time that the problem occurred.



John set-up containment procedures at the plant warehouse to sort for discrepant materials. As of this morning, two more defective brackets had been found in the remaining 2019 pieces of inventory at Flex.

Cause Investigation

John went out to the floor to talk with the team leader of the two rivet lines (East and West) and the area quality assurance auditor. He informed Sam (the team leader) of the quality problem and asked him to identify the line which runs the stabilizing bracket assembly. Sam directed John to the East line which runs Winding River assembly brackets only.

At the East Line, he spoke with Judy (the QA Auditor for the area) and asked to see the quality log sheets. John and Judy reviewed the Nov. 11th log sheet and could not find anything out of the ordinary. He asked her to set-up in-house containment procedures to sort for any discrepant material in the finished goods area.

Next, John tried to locate the second shift operator whose clock number was on the defective parts. Since that operator was gone, John spoke with the current machine operator (Ben). He asked Buddy about any recent difficulties with the rivet machine. Buddy said that he hadn't noticed anything out of the ordinary. Buddy also mentioned, however, that there had never been any quality bulletins posted in the two years that this particular part has been running.

John decided to stay in the area to watch the machine run for a while. After about 15 minutes, he watched Buddy dump rivets into the feeder bowl to prepare for the next run.

Shortly after restarting rivet operations, Buddy walked over to another riveter and came back with a steel rod. Buddy poked around the rivet chute and then continued working. John approached Buddy and asked him about the steel rod. Buddy replied that from time to time the chute gets jammed and he has to clear it out. This happens two or three times during a shift. He didn't mention this in his earlier conversation with John because the problem has existed ever since he started working with this machine. The previous operator showed him how to clear the chute. All the rivet machines are like this.

John called the Machine Repair Department and asked that someone look at the rivet track. A slight gap in the track was found and removed, and Buddy continued to work.

Two hours later, John got a call from Buddy saying that the track was still jamming. As far as John could see, only rivets were in the bowl. Next, John looked into the rivet supplier containers. There was some foreign material in the blue container, but none in the red container. The label on the blue container showed that it was from Riley Rivet, Inc., and the label on the red container indicated that it was from Friendly's Fasteners. Obviously, the foreign material was entering the rivet feeder bowl and jamming the track.

John called Maintenance and requested that the bowl be cleaned. He also added the cleaning operation to the preventive maintenance schedule on the equipment. He then called both Riley Rivet, Inc. and Friendly's Fasteners. He asked about the cleaning procedures on the returnable containers. Friendly's did a full container purge and clean. Riley just re-introduced the containers back into their system. When John asked why Riley did not clean their containers, he was told that Riley was not aware that such a policy was needed.

Upon further investigation, John learned that Friendly's Fasteners supplies other major automotive companies. Since these companies require that all returnable containers be cleaned, Friendly's instituted the purge as part of its practice for all customers. Riley Rivet, however, depends primarily on XYZ as its major customer. No such policy has ever been required of them.

KEY PLAYERS	
John	Quality Manager
Janet	CSE, Winding River Plant
Sam	Team Leader, East Line
Judy	QA Auditor, East Line
Buddy	Machine Operator

Questions:

- 1. Visualiser l'enchaînement des événements en faisant apparaître le point de cause.*
- 2. Quel pourrait être l'objectif de la société XYZ*
- 3. Réaliser le diagramme ' 5 pourquoi' de ce problème qualité, en faisant apparaître les causes d'occurrence et de non détection.*
- 4. Quelles ont été les bonnes pratiques de John dans son approche de la résolution de ce problème ?
Quel bénéfices ont-elles eu sur l'investigation.*
- 5. (DM) proposer un plan d'action sur la base de l'analyse.*