The Toyota Case

Wednesday, October 25, 2006

The Toyota Approach to Problem Solving:
How does Toyota Handle Problems?

- Scientific Method
- Root Cause
- Teaching Case

Roles of the Toyota *"Leaders"*?

The Cost of Stopping the Line

- Each member has 12 andon pulls per shift
- 350 employees x 12 andon pulls = 3,000 – 4,000 pulls per shift!
- Final 1
  - 360 pulls per shift
  - Every 1.25 mins
  - One line stop every 15 minutes

The Cost of Stopping the Line

- This sounds costly!
- Anyone figure out the actual costs?

Figure it out: Rough figures!

Rough Costs

- Hourly Wage of $17 per hour
- Stoppage per cycle = 57 seconds
  - One lost car ($18,500 – Mid-sized sedan)
  - ??? What's the profit margin?
- Let's grind the whole place to a halt:
  - Buffers decouple each segment
  - Let's assume 30 minute stoppages
  - 4,000 people, cost = ?

How bad are these figures?

Is it worth it?

Toyota Video

- What is Friesen to do on Monday morning?
- The area depicted is Final Assembly 1 & 2 where Friesen visited on Friday afternoon
- Area depicted in Exhibit 6
- Show jidoka Tool

Toyota Video
5 Minute Interlude

You're Team Doug.

What are you going to do about this seat defect problem on Monday Morning?

What's the real problem?

They have lost the Toyota way

What's the real problem?
What's the Real Issue

What happens when a worker pulls the Andon cord?

What should the team leader do?
Then what?
How is he or she chosen?

What should the Group leader do?
Why?
How is he or she chosen?
Should these leaders be considered wasteful?

What's the real problem?

- Two problems?!

They have lost the Toyota way

What's the real problem?
What's the Real Issue

- **Georgetown mgrs don't know what is causing the problem**
- And how else to say this?

What's the plan?
Assume you do their plan?

How much space do you need for backup seats?

Solution 1

Install Mechanism that enable mgrs to learn about what they need to know, and then confront quickly to root causes

Plans?

Discuss among yourselves

- **How and when do you replenish?**
- **Where should be located?**
- **What happens when seat variety increases?**
- **What is significance, in light of Toyota, of such stockpiling?**

Leftover Seat Defects
take lots of time

No jidoka tools
Nothing subbed for Andon Pulls

What was actually done I

- Revised Seat Reorder form
- KFS stationed its own QC engineers at TMM to survey incoming seats
- And???

Plans?
Understand first

- **Alert to existence of defects**
- **Isolate possible causes**

Plans?

What was actually done II

- Instructed Creemens to tape off space in overflow for seat defects – Trigger mini May 1 type meeting

Results

- By May 1992
  - Faster problem solving cycles
  - Weekly defects feel from 40s to 30s at month end
- With Seat Variations came the 100 mark in Summer
- After a few more May 1 meetings, it went down to 40s again