UBC SAUDER SCHOOL OF BUSINESS

ROBERT H. LEE GRADUATE SCHOOL

Process Fundamentals BASC_V 500 TMM USA

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Q1. Do you think the line should be stopped when the seat assembly station identifies a defective seat? (Yes or no)

Yes

Q2. Please justify your answer to the above question.

The current practice of allowing cars with defective seats to proceed down the line goes against Toyota's core **Jidoka principle**, which emphasizes building quality into the production process. By avoiding line stoppages, Toyota Motor Manufacturing (TMM) is prioritizing short-term production volume over long-term efficiency and quality. Here's why stopping the line is the right decision:

A. Hidden Costs of Allowing Defects to Pass:

- *Off-Line Bottlenecks:* Defective seats lead to cars being moved to overflow parking for replacement seats, causing delays, backlogs, and higher off-line inventory.
- *Mismatched Replacements*: Mismatched Replacements: Poor communication and lack of real-time tracking between TMM and KFS result in KFS sending incorrect seats, further delaying repairs.
- *Masking Root Causes:* Avoiding line stoppages bypasses issues like rear seat bolster plastic hook breakage, preventing long-term solutions and perpetuating inefficiencies.

B. Alignment with Toyota Production System (TPS):

- *Jidoka Principle:* "Automation with a human touch" requires immediate production stoppages when defects are detected, ensuring problems are solved at the source.
- *Five Whys Methodology:* Skipping line stoppages contradicts this problem-solving approach, which identifies and resolves root causes by repeatedly asking "why."
- *Kaizen Mindset:* The exception for seat defects undermines continuous improvement by tolerating inefficiencies instead of pursuing proactive solutions

C. Accountability with the Supplier (KFS):

- *Supplier Collaboration:* KFS's sequential pull system is strained by the growing complexity of seat variations. Stopping the line would force better collaboration and communication, reducing mismatches.
- *Cost of Defects:* Off-line repairs are more costly and time-consuming than addressing defects on the line. Line stoppages would push KFS to improve quality and reduce defects upstream.

D. Long-Term Benefits of Stopping the Line:

- *Improved Quality:* Stopping the line reinforces TMM's focus on quality, maintaining Toyota's reputation for excellence.
- *Reduced Overtime:* On-line defect resolution reduces the need for overtime to recover from production shortfalls
- *Stronger Supplier Relationship:* Collaborative problem-solving with KFS would strengthen the partnership, leading to better coordination and fewer defects in the future.