Data Tagging

A Summary Report

Approach of Tagging

I approached the tagging of each given field systematically:

1. **Root Cause**

This identifies why the problem occurred.

Approach:

- I looked for the main reason behind the issue, such as poor assembly, material defects, or wear and tear.
- I used consistent terms like "Not Tightened," "Failed Sending," or "Poor Material" based on the context.

2. **Symptom Condition**

This shows the visible problem caused by the root cause.

Approach:

- I identified keywords or phrases describing the issue (e.g., "Loose," "Won’t stay open," "Oil Running").
- I matched these conditions to the symptoms described in the reports.

3. **Symptom Component**

This is the specific part or system affected by the issue.

Approach:

- I found the part or system mentioned in the complaint, like "Cab P Clip" or "Fuel Door."
- If more parts were affected, I listed them as well.

4. **Fix Condition**

This explains what was done to fix the problem.

Approach:

- I focused on the actions taken (e.g., "Retightened," "Replaced," "Installed").
- I made sure the action matched the symptom condition.

5. **Fix Component**

This identifies the part or system that was repaired or replaced.

Approach:

- I matched the fix with the specific component mentioned, like "Gas Strut" or "Braided Steel."
- I made sure the fix was related to the correct symptom component.

Potential Insights

With a dataset of 10k rows, several valuable insights can be generated:

1. **Trend Analysis**: Identifying recurring issues over time, such as common root causes or frequent symptoms, which could highlight systemic problems or manufacturing defects.
2. **Root Cause Frequency**: Analysing which root causes are most prevalent, helping prioritize areas for quality control improvements or preventive measures.
3. **Fix Efficiency**: Tracking how different fixes address symptoms over time and assess their effectiveness, identifying the most reliable solutions.
4. **Component Performance**: Identifying which components are most often involved in issues, allowing for targeted improvements in design or material selection.
5. **Geographical Patterns**: If location data is available, determining if certain areas face more frequent issues, suggesting issues with specific suppliers or regional factors.
6. **Cost Optimization**: Analysing the frequency of repairs or replacements, helping to forecast parts usage, reduce downtime, and optimize maintenance costs.
7. **Predictive Maintenance**: Using historical data to predict when and where issues might arise, enabling proactive maintenance.

These insights can drive better decision-making in manufacturing, maintenance, and resource allocation.