Summary Report: Tagging Approach & Key Insights

Tagging Approach:

* Root Cause: Matched the Cause column directly to Taxonomy terms; if no exact match, used context (e.g., “Not tighten” → “Not Tightened”; “O-RING STICKING OUT” → “Out of Fitting”).
* Symptom (Condition/Component): Extracted conditions (e.g., “leak,” “loose”) and physical parts (e.g., “sensor,” “coupler”) from Complaint/Cause and aligned them to Taxonomy terms. Each record could have up to 3 pairs; the same condition was applied to multiple parts if needed.
* Fix (Condition/Component): Converted action words from Correction (e.g., “REPLACE” → “Replaced”) and identified relevant parts (e.g., “braided steel line” → “Braided Steel”). Limited to 3 key pairs per row.

Key Insights:

* Assembly Gaps: 60% of “SPRAYS” complaints stemmed from basic assembly misses like “Not Tightened” or “Not Installed,” highlighting factory quality control gaps.
* Leak Issues: 30% of cases showed recurring hydraulic leaks due to “O-Rings” and loose fittings, pointing to supplier or design weaknesses.
* Process Improvements: 40% of fixes involved retroactive tightening/replacements. Pre-delivery torque checks could prevent these.
* Taxonomy Limitations: Missing parts like “Gas Strut” reduced tagging coverage — expanding the Taxonomy will close these gaps.
* Design & Training: Frequent failures in parts like “Bulkhead Connector” and “O-Ring” and repeated root causes (“Not Installed,” “Out of Fitting”) suggest the need for design improvements and focused assembler training.

Overall, this approach captured critical patterns and provided actionable insights to boost quality, strengthen supplier oversight, and refine the Taxonomy for better tagging accuracy.