**CURRENT STATE OF CONDITION CODES:**

EO North historically has used the Condition Code (form X30390) process reactively, primarily as supplemental justification for capital asset retrofit or replacement. It involves equipment assessment (Electrical, Mechanical, Spare Parts availability, Maintenance History, OSHA, etc.) by Equipment Engineering, Equipment Services Maintenance and Shop personnel to determine an overall condition rating of the asset and a recommendation to repair, rebuild, modify or replace as applicable. Due to the nature of the process, involving several job roles and being fairly labor intensive, it is not typically used as a preemptive tool.

**PURPOSE OF LIFE CYCLE ANALYSIS:**

Life Cycle Analysis (LCA) is a risk management process that uses the Advanced Life Cycle Analysis (ALCA) tool to help sustain the health of production equipment. Some important decisions made when performing an ALCA include which assets to purchase/retire, the financial impact of continuing to operate an unreliable asset, and prioritizing asset action plans based on highest overall risk. It is an Excel-based application to determine the health state of an asset, recommended actions, and informed decision making in order to determine next steps for the business.

**HOW TO START THE LCA PROCESS:**

The Emergent Operations Project Managers will submit a request to initiate an ALCA. This request can either be external to maintenance (i.e. Operations Manager) or internal (i.e. Maintenance Manager, system generated). The Maintenance Manager helps to facilitate an ALCA, gathering the right stakeholders to participate in the cross-functional team meeting, and driving cross-functional team member actions. The Maintenance team manages the ALCA request via a Maximo work order, creating a Preventive Maintenance (PM) document or a Planned Job (PJ). Assets are defined by their criticality definition, leading to actions based on their assignment in the following chart:

|  |  |  |
| --- | --- | --- |
| **Criticality** | **Asset Type by Criticality Definition** | **Action** |
| PC - Production Critical | * Assets that are critical to the production process and have an uptime goal of 100%. * Single point of failure to the production process (this should take into account whether there is a single asset or multiple assets working together to meet rate). * No redundancy or back up available for the asset. * Failure of asset would shut down production, including delivery of services provided by The Boeing Company. * No mitigation plan and/or requires external offload or high cost. * Work around would require extensive down time. * These assets are targeted to be maintained to the very highest industry standards using TPM Proactive Maintenance Strategies. | * Total Production Maintenance (TPM) * Root Cause Corrective Action (RCCA) * Failure Mode Effect Analysis (FMEA) * Overall Equipment Effectiveness (OEE) * Conditioned Based Maintenance (CBM) * Reliability Center Maintenance (RCM) |
| C - Critical | * Assets that impact production and would have considerable impact to production schedule; product quality; or safety, regulatory and environmental concerns. * Will create significant impact to the production process without line stoppage. * There is redundancy or backup available for the asset (N+1). * Has a mitigation plan to reestablish the service and production workaround is available (requires approval process or document to validate and must be an impact free mitigation plan to production process). | * Conduct Preventative Maintenance Optimization (PMO) * Compare like assets/ID Commonalities * Standardize to best practices * Lunch eater reviews QRTLY(Opportunities) * Explore CBM opportunities |
| MC – Moderate Criticality | * Assets that impact production and would have a measurable impact to production schedule; product quality; or safety, regulatory and environmental concerns. | * PM cleanup - task redundancy, extend frequencies. * Administer Precision Maintenance * Explore CBM opportunities |
| LC – Low Criticality | * Assets that are of low value, have little or no impact to production; however, may require minimal maintenance. | * Shut off PM * If a PM is warranted, focus on health checks, safety and non-invasive maintenance. |
| NC – Not Critical | * Assets that are of low value, easily replaced and have little or no impact to production, schedule, or infrastructure. * Run-to-failure assets. | * Shut off PM’s |

**LCA PROCESS FLOW & FORMS:**

Use the below Excel document link in order to consult the process flow for the life cycle analysis, input assets, and inspect the health and risks associated with certain assets:

[**\\NW\data\EO-North\_Shipside\Customer\_Services\EO-North-Webpage\docs\adv-lca-form.xlsm**](file:///\\NW\data\EO-North_Shipside\Customer_Services\EO-North-Webpage\docs\adv-lca-form.xlsm)