ChecklistGuro

Reliability-Centered Maintenance (RCM) Checklist

Asset Identification & Scope Definition

Defining the assets included in the RCM analysis and establishing clear boundaries.

Asset Name/Designation

Write something...

Asset ID / Serial Number

Enter a number...

Brief Description of Asset and its Purpose in Manufacturing

Write something...

Asset Location within the Manufacturing Facility

Set My Current Location

Criticality Ranking (High, Medium, Low)

- [ ] High
- [ ] Medium
- [ ] Low

Date of Last Major Overhaul/Replacement

Enter date...

List of Connected Systems / Interdependencies

Write something...

Asset Status (Operational, Out-of-Service, Decommissioned)

- [ ] Operational
- [ ] Out-of-Service
- [ ] Decommissioned

Functional Analysis

Understanding the intended functions of the equipment and their importance to the manufacturing process.

Describe the primary function(s) of the equipment in the manufacturing process.

Write something...

Describe the secondary or supporting functions of the equipment.

Write something...

What is the criticality of this equipment to production?

- [ ] Critical - Production Halt if Failure
- [ ] Major - Significant Production Impact
- [ ] Moderate - Minor Production Impact
- [ ] Low - Minimal Production Impact

Estimated Production Output (Units/Hour) if equipment is functioning normally.

Enter a number...

List any dependencies the equipment has on other systems or processes.

Write something...

Is the equipment part of a critical safety system?

- [ ] Yes
- [ ] No

Describe any regulatory or compliance requirements related to the equipment’s function.

Write something...

Failure Mode Identification

Identifying potential ways the equipment can fail and impact its function.

Describe the Potential Failure Mode

Write something...

Failure Mode Category (e.g., Mechanical, Electrical, Hydraulic)

- [ ] Mechanical
- [ ] Electrical
- [ ] Hydraulic
- [ ] Pneumatic
- [ ] Software/Control
- [ ] Other

Estimated Frequency of Failure Mode (per year)

Enter a number...

Initial Severity of Failure Mode (Impact on Process)

- [ ] Catastrophic
- [ ] Critical
- [ ] Major
- [ ] Moderate
- [ ] Minor

Describe any visible indicators or warning signs of this failure mode

Write something...

Which components are directly involved in this failure mode?

Failure Effect Analysis

Determining the consequences of each failure mode on the overall manufacturing process.

Describe the Impact on Production Output

Write something...

Describe the Impact on Product Quality

Write something...

Describe the Impact on Safety (Personnel and Environment)

Write something...

Describe the Impact on Other Equipment or Processes

Write something...

Estimated Downtime (hours) due to this failure mode

Enter a number...

Estimated Cost of Production Loss (USD) due to this failure mode

Enter a number...

Estimated Cost of Repair/Replacement (USD)

Enter a number...

Severity Ranking (1-Critical, 5-Minor)

- [ ] 1 - Critical
- [ ] 2 - Major
- [ ] 3 - Moderate
- [ ] 4 - Minor
- [ ] 5 - Negligible

Failure Cause Identification

Identifying the root causes and contributing factors for each failure mode.

Describe the primary cause of the failure mode.

Write something...

Select all contributing factors to the failure (e.g., environment, operator error, material defect).

- [ ] Environmental Conditions (Temperature, Humidity, Vibration)
- [ ] Lubrication Issues
- [ ] Operator Error/Training
- [ ] Material Degradation
- [ ] Design Flaw
- [ ] Installation Error
- [ ] Power Supply Issues
- [ ] Incorrect Part/Component
- [ ] Other (Specify in LONG_TEXT)

Estimated Frequency of Root Cause Occurrence (e.g., times per year)

Enter a number...

Describe any historical data or past incidents that support the identified root cause.

Write something...

Severity of Root Cause (Impact on overall system failure)

- [ ] Critical
- [ ] Major
- [ ] Moderate
- [ ] Minor

Upload any supporting documentation (e.g., maintenance logs, inspection reports, test results).

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Describe the current level of control or mitigation for this root cause (if any).

Write something...

Maintenance Task Selection

Selecting appropriate maintenance tasks to prevent or mitigate failures, based on risk assessment.

Primary Maintenance Task Type?

- [ ] Time-Based Maintenance (Preventive)
- [ ] Condition-Based Maintenance (Predictive)
- [ ] Run-to-Failure (RTLF)
- [ ] Criticality-Based Maintenance

Task Frequency (if Time-Based)

Enter a number...

Task Description & Procedure

Write something...

Condition Monitoring Method (if Condition-Based)

- [ ] Vibration Analysis
- [ ] Infrared Thermography
- [ ] Oil Analysis
- [ ] Ultrasonic Testing
- [ ] Motor Current Signature Analysis (MCSA)
- [ ] None

Condition Threshold Limit

Enter a number...

Initial Task Implementation Date

Enter date...

Skills Required for Task Completion

- [ ] Mechanical
- [ ] Electrical
- [ ] Hydraulic
- [ ] PLC Programming
- [ ] Instrumentation
- [ ] Other

Rationale for Task Selection

Write something...

Task Priority Level

- [ ] Critical
- [ ] High
- [ ] Medium
- [ ] Low

Maintenance Task Implementation & Scheduling

Implementing and scheduling the selected maintenance tasks into the maintenance plan.

Maintenance Task Priority (Based on RCM Analysis)

- [ ] Critical
- [ ] High
- [ ] Medium
- [ ] Low

Scheduled Task Start Date

Enter date...

Scheduled Task Start Time

Estimated Task Duration (Hours)

Enter a number...

Detailed Task Instructions & Safety Precautions

Write something...

Required Tools & Equipment

- [ ] Hand Tools
- [ ] Power Tools
- [ ] Specialized Equipment
- [ ] Lifting Devices
- [ ] Testing Equipment

Maintenance Skill Level Required

- [ ] Level 1 - Basic
- [ ] Level 2 - Intermediate
- [ ] Level 3 - Advanced
- [ ] Level 4 - Expert

Attach Relevant Documentation (e.g., diagrams, procedures)

Upload File

RCM Documentation & Review

Documenting the RCM process, decisions, and findings, and establishing a review schedule.

RCM Plan Narrative Summary

Write something...

Date of Initial RCM Analysis

Enter date...

Date of Last RCM Review

Enter date...

Review Frequency (e.g., every 12 months)

Enter a number...

Review Type

- [ ] Full Review
- [ ] Partial Review
- [ ] Confirmation Review

Summary of Review Findings & Actions

Write something...

Areas of Review Considered (check all that apply)

- [ ] Failure Modes
- [ ] Maintenance Tasks
- [ ] Task Frequency
- [ ] Criticality Assessment
- [ ] Spare Parts Inventory

Supporting Documentation (e.g., updated FMEA)

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Reviewer Name

Write something...

Reviewer Signature

Training and Communication

Ensuring maintenance personnel are properly trained on the RCM plan and the reasoning behind maintenance tasks.

Training Objectives Description

Write something...

Topics Covered in RCM Training (Select All That Apply)

- [ ] Asset Identification & Scope
- [ ] Functional Analysis
- [ ] Failure Mode Identification
- [ ] Maintenance Task Selection
- [ ] RCM Logic & Decision Making
- [ ] Maintenance Procedure Documentation

Number of Personnel Trained (Initial)

Enter a number...

Date of Last RCM Training Session

Enter date...

Summary of Key Training Messages & Communication Strategy

Write something...

Communication Method for RCM Updates/Changes

- [ ] Team Meetings
- [ ] Email Notifications
- [ ] Bulletin Boards
- [ ] Digital Communication Platform (e.g., Slack, Teams)

Training Materials Upload (e.g., Presentations, Guides)

Upload File

Continuous Improvement & Monitoring

Monitoring the effectiveness of the RCM plan and making adjustments as needed based on performance data.

Mean Time Between Failures (MTBF) Trend

Enter a number...

Mean Time To Repair (MTTR) Trend

Enter a number...

Failure Rate (Failures per Unit Time)

Enter a number...

Deviation from Planned Maintenance Task Completion?

- [ ] On Time
- [ ] Delayed
- [ ] Not Completed

Observations and Notes on Equipment Performance

Write something...

Date of Last RCM Review

Enter date...

Areas for Potential Improvement Identified?

- [ ] Task Effectiveness
- [ ] Task Frequency
- [ ] Parts Availability
- [ ] Training Needs
- [ ] Documentation Accuracy

Summary of RCM Plan Effectiveness Discussion

Write something...