

# Reliability-Centered Maintenance (RCM) Checklist

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## 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...

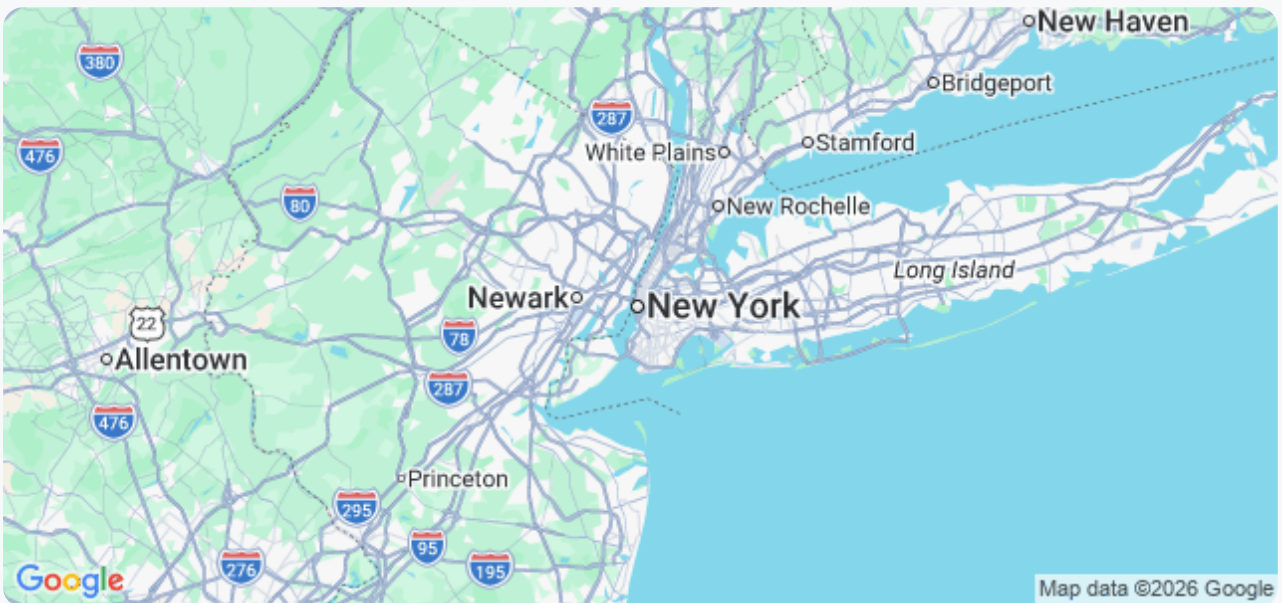


## Brief Description of Asset and its Purpose in Manufacturing

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).

 Upload File

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

## Scheduled Task Start Time

## Estimated Task Duration (Hours)

## 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)

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# 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...