

# SMED (Single-Minute Exchange Of Die) Checklist

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## Preparation & Planning

Focuses on pre-exchange activities to minimize downtime. Includes planning, tool preparation, and setup optimization.

### Brief Description of the Die/Tool Being Exchanged

Write something...

### Current Exchange Time (in minutes)

Enter a number...



### Date of Last Exchange

Enter date...

### Frequency of Exchange (e.g., every shift, daily, weekly)

- Every Shift
- Daily
- Weekly
- Other

### Initial Hypothesis for Potential Improvements

Write something...

### Attachment: Current Exchange Process Flowchart (if available)

 Upload File

### Target Exchange Time (Initial Goal)

Enter a number...

### Potential Areas for Improvement (Select all that apply)

- Tool/Die Transport
- Die/Tool Attachment
- Machine Setup
- First Piece Inspection
- Operator Training
- Ergonomics

### Team Members Involved in the S.M.E.D. Review

Write something...

## Current State Analysis

Details the existing exchange process, identifying time-consuming steps and bottlenecks. Includes time measurements and activity mapping.

### Total Exchange Time (Current)

Enter time...

### Number of Steps in Current Exchange Process

Enter a number...

### Detailed Description of Current Exchange Procedure (Step-by-Step)

Write something...

### Time Spent on Each Step (Record for Representative Exchanges)

Enter a number...

### Equipment Involved in Exchange Process (e.g., forklift, crane)

Write something...

### Activities Requiring Machine Stop (Select all that apply)

- Die/Tool Installation
- Alignment
- Securing
- Machine Setting Adjustments
- Other (Specify in Long Text)

### Observations & Challenges Encountered During Current Exchange

Write something...

### Process Flow Diagram (Current State)

 Upload File

## Internal Activity (While Machine is Still Running)

Focuses on activities that can be performed while the machine continues production. Aims to overlap exchange activities with production.

### Time Saved (Minutes) - Pre-Staging Die/Tool

Enter a number...

### Detailed Description of Pre-Staging Activities

Write something...

### Die/Tool Transport Method

- Manual Transport
- Automated Transport (e.g., AGV)
- Other

### Distance Traveled (feet) – Die/Tool Transport

Enter a number...

### Observed Issues with Current Transport Method

Write something...

### Estimated Time for Pre-Positioning Die/Tool

Enter time...

### Resources utilized during internal activity

- Operator
- Maintenance
- Technician
- Other

### Notes on Operator Training Needs Regarding Internal Activities

Write something...

# External Activity (Requires Machine Stop)

Activities that *must* be done while the machine is stopped. The goal is to minimize the time spent in this category.

## Current External Exchange Time (Minutes)

## Detailed Description of External Activities Performed

## Number of Operators Required for External Activities

## Current Method for Die/Tool Transport

- Manual
- Forklift
- Automated Guided Vehicle (AGV)
- Other

### Potential Causes for Long External Exchange Times

Write something...

### Distance Die/Tool Needs to be Moved (meters)

Enter a number...

### Current Method of Alignment (if any)

- Visual
- Laser
- Gauge
- None

### Describe any difficulties encountered during alignment

Write something...

## Tool/Fixture Preparation

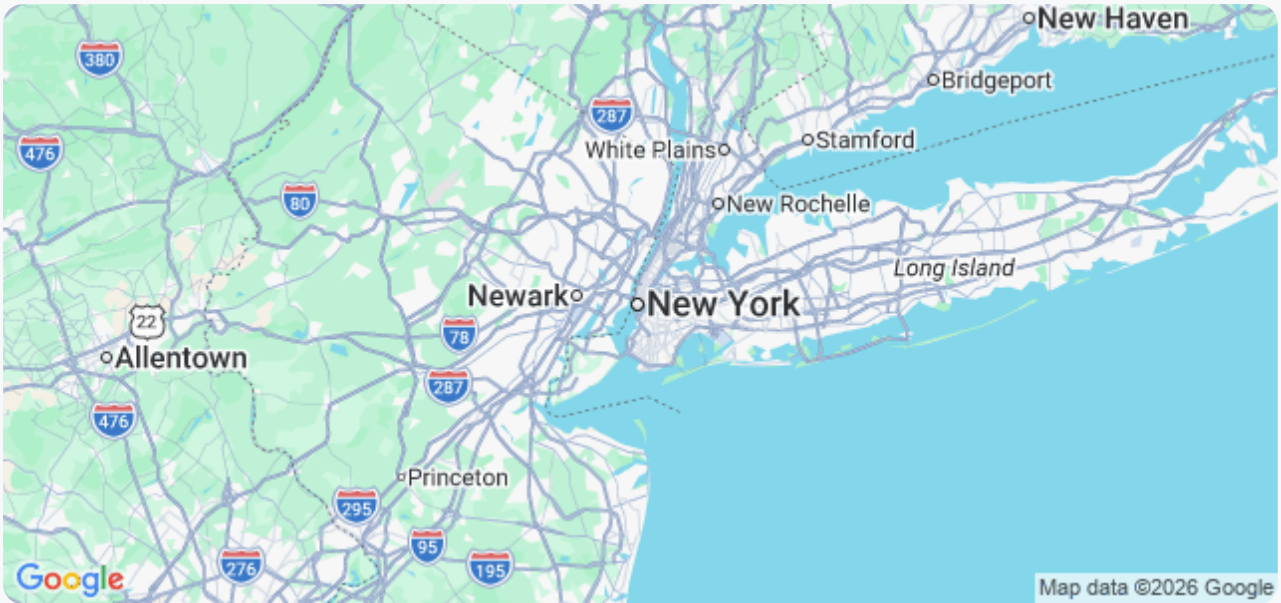
Covers the preparation and movement of dies, tools, and fixtures, including pre-staging and quick-change mechanisms.

### Die/Fixture Weight (kg)

Enter a number...

## Pre-staging Location of Die/Fixture

 Set My Current Location



## Distance Die/Fixture is Moved (m)

Enter a number...

## Material Handling Equipment Used (e.g., hoist, cart, forklift)

- Hoist
- Cart
- Forklift
- Manual Handling
- Other

### Description of any quick-change mechanisms used

Write something...

### Condition of Pre-staging Area (Cleanliness, Organization)

- Excellent
- Good
- Fair
- Poor

### Photograph of Pre-staging Area

 Upload File

### Time to Retrieve Die/Fixture (minutes)

Enter a number...

## Setup Procedures - Die/Tool Attachment

Focuses on the actual attachment of the die/tool to the machine, including alignment and securing.

### Current Die/Tool Attachment Time (minutes)

Enter a number...

### Detailed Description of Current Attachment Procedure

Write something...

### Attachment Method (e.g., clamping, hydraulic, pneumatic)

- Clamping
- Hydraulic
- Pneumatic
- Other (Specify in Long Text)

### Number of Hand Tools Used During Attachment

Enter a number...

### Description of any alignment aids or fixtures used

Write something...

### Photo/Diagram of Current Attachment Setup

 Upload File

### Current Alignment Method

- Visual
- Gauge
- Laser
- Other

### Describe any challenges or difficulties encountered during attachment

Write something...

## Setup Procedures - Machine Settings & Adjustments

Covers adjustments to machine parameters (e.g., pressure, temperature, speed) following die/tool change.

### Target Cycle Time (New Settings)

Enter a number...

### Current Cycle Time (Existing Settings)

Enter a number...

### Machine Parameter 1: (e.g., Pressure)

- Increase
- Decrease
- No Change

### Value Change for Parameter 1

Enter a number...

### Machine Parameter 2: (e.g., Temperature)

- Increase
- Decrease
- No Change

### Value Change for Parameter 2

Enter a number...

### Notes on Parameter Adjustments

Write something...

### Calibration Required?

Yes

No

### Calibration Date (If Required)

Enter date...

## Verification & First Piece Inspection

Details the process for confirming the die/tool is correctly installed and the machine is producing acceptable parts. Includes first piece quality checks.

### Target First Piece Cycle Time (seconds)

Enter a number...

### Actual First Piece Cycle Time (seconds)

Enter time...

### First Piece Quality - Visual Inspection

- Acceptable
- Minor Adjustment Needed
- Major Adjustment Needed
- Reject

### Detailed Observations - Visual Inspection

Write something...

### Dimensions Measured (Number of points)

Enter a number...

### Dimension Measurement Results

Write something...

### First Piece Acceptable?

Yes

No

### Reason for Rejection (if applicable)

Write something...

### Date of First Piece Verification

Enter date...

### Operator Signature

Write something...

## Standardization & Documentation

Ensures the improved exchange process is documented, standardized, and consistently followed. Includes training and visual aids.

### Detailed Standard Operating Procedure (SOP) Description

Write something...

### Updated Visual Work Instructions (e.g., Photos, Diagrams)

 Upload File

### Training Materials Distributed (Check all that apply)

- SOP Document
- Visual Work Instructions
- Video Tutorial
- Classroom Training
- On-the-Job Training

### Number of Personnel Trained on Updated Procedure

Enter a number...

### Date of Last Procedure Review & Update

Enter date...

### Name of Person Responsible for Maintaining SOP

Write something...

### Documentation Location (Physical/Digital)

- Physical Binder
- Shared Drive
- Cloud Storage

### Summary of Change Log / Revision History

Write something...

## Continuous Improvement

Addresses ongoing monitoring, data analysis, and refinement of the SMED process for ongoing optimization.

### Current Exchange Time (Minutes)

Enter a number...

### Target Exchange Time (Minutes)

Enter a number...

### **Date of Last S.M.E.D. Review**

Enter date...

### **Summary of Recent Improvements/Changes**

Write something...

### **Number of Times Process Has Been Performed Since Last Review**

Enter a number...

### **Areas for Further Investigation/Improvement (Select all that apply)**

- Tool Pre-staging
- Fixture Design
- Machine Alignment
- Operator Training
- Part Presentation
- Other - Please Specify

### Specific Actions Planned for Next Review Cycle

Write something...

### Overall S.M.E.D. Effectiveness (1-5, 1=Poor, 5=Excellent)

- 1 - Poor
- 2 - Fair
- 3 - Average
- 4 - Good
- 5 - Excellent

### Next Review Date

Write something...