



# SMED (Single-Minute Exchange of Die) Checklist

## 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)**

**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

### 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)

Enter a number...

### Detailed Description of External Activities Performed

Write something...

### Number of Operators Required for External Activities

Enter a number...

### 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)

### 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...