# GPSC Academy

Leaders Teach & Leaders Learn

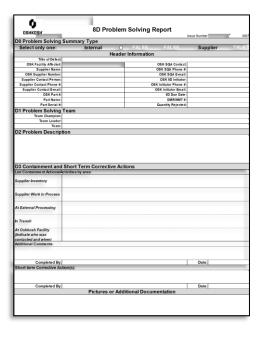


# 8D Corrective Action – Agenda

- Introduction
- Overview
- Process Steps
  - D0 Initiate 8D Corrective Action
  - D1 Problem Solving Team
  - D2 Problem Description
  - D3 Containment and Short-Term Corrective Actions
  - D4 Root Cause Analysis
  - D5 Long-Term Corrective Actions
  - D6 Implementation and Verification of Long-Term Corrective Actions
  - D7 Preventative Actions (Systemic Corrective Actions)
  - D8 Congratulate the Team and Wrap-up
- Oshkosh 8D Form
- Key Steps
  - Defining the Problem
  - Root Cause Analysis



## 8D Corrective Action – Introduction

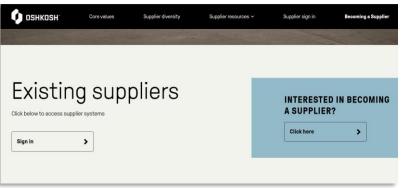


- Oshkosh Corporation uses the 8D (eight disciplines) corrective action process to address significant or repeat supplier quality issues.
  - An effective 8D must drive permanent improvement of supplier processes to prevent recurrences of the incident. It is the supplier's responsibility to ensure the required actions occur in a timely manner.
- For specific issues, Oshkosh may request that supplier perform and document the 8D process.
- Oshkosh suppliers should address and correct quality issues independent of whether Oshkosh initiates an 8D.



### 8D Corrective Action – Overview

- The 8D process is a team-based problem-solving method that can be used on a variety of problem types:
  - Quality
  - Cost
  - Schedule
  - Safety
- The Oshkosh 8D form and procedure is available on the Oshkosh Supplier Portal for suppliers to use as needed.
  - (https://osn.oshkoshcorp.com/)



## 8D Corrective Action – Process Steps

#### 8D Problem Solving & Corrective Action:

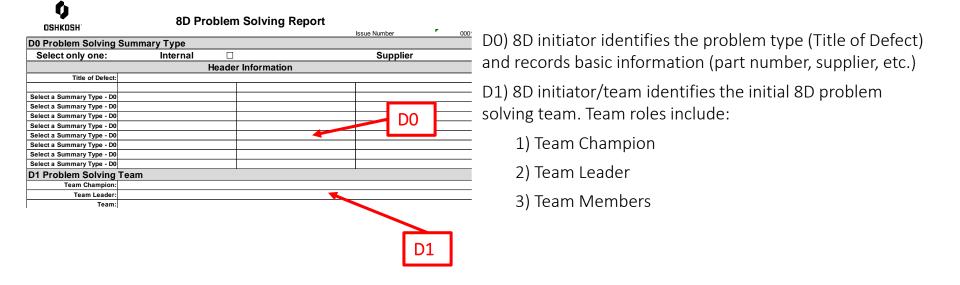
- D0 Initiate 8D Corrective Action
- D1 Problem Solving Team
- D2 Problem Description
- D3 Containment and Short-Term Corrective Actions
- D4 Root Cause Analysis
- D5 Long-Term Corrective Actions
- D6 Implementation and Verification of Long-Term Corrective Actions
- D7 Preventative Actions (Systemic Corrective Actions)
- D8 Congratulate the Team and Wrap-up

#### Process Expectations:

- 24 hours after notification, containment is required
- 15 days or less for root cause identification
- 30 days or less corrective action completed
- 45 days or less validation / closure of 8D



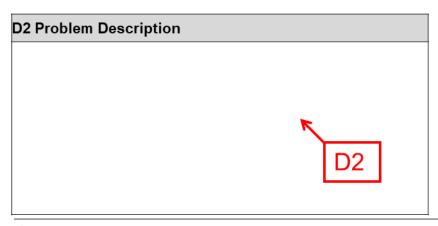
## Technical Reviews – Technical Review Process



# 8D Corrective Action – Process Steps

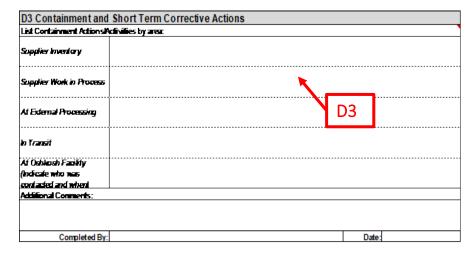
#### D2) Problem solving team develops a detailed problem description:

- Provide detailed information on the specifics and scope of the problem.
- This IS / IS NOT worksheet attached to the 8D form can be used.
- Defining the problem is one of the most critical steps.





# 8D Corrective Action – Process Steps



D3)

#### Containment

Problem solving team immediately contains any suspect parts:

• Provide details of containment actions that have been completed along the entire pipeline.

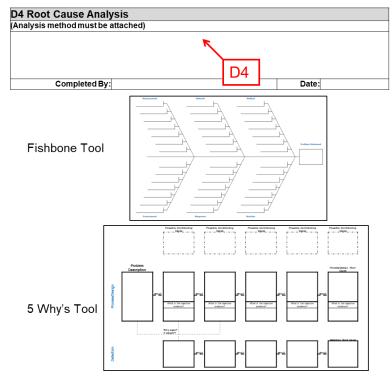
#### **Short-Term Corrective Actions**

Problem solving team develops short-term solution to "attack the symptoms" while root cause is investigated.

• Containment Level 1 & 2 (CL1 & CL2) are very effective short-term fixes for supplier quality issues.

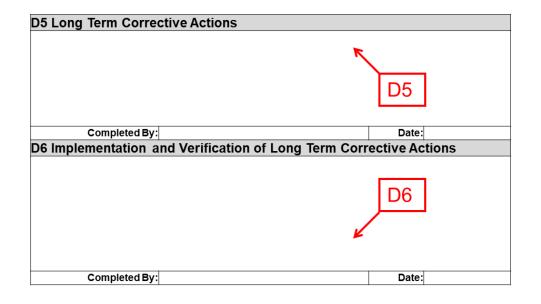


## Technical Reviews – Technical Review Questions



- D4) Problem solving team determines the process or design related root cause for the problem.
- The 8D form includes a fishbone analysis tool that can be used to perform structured brainstorming for difficult problems.
- The 8D form also includes a 5 why's form that can be used to perform the root cause analysis.
- D4 is a critical step. The Oshkosh 8D procedure requires that the root cause analysis method be attached to the 8D report.

## Technical Reviews – Technical Review Questions



D5) Problem solving team determines the corrective action plan to address the root causes that were identified in D4.

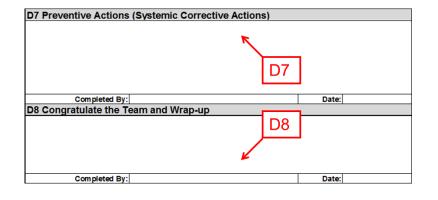
• Corrective actions must be formally implemented and specific.

D6) Problem solving team follows up on the corrective action plan to:

- Provide objective evidence that the corrective action plan was implemented correctly.
- Provide objective evidence that the corrective actions effectively prevented re-occurrences of the problem.



## Technical Reviews – Technical Review Questions

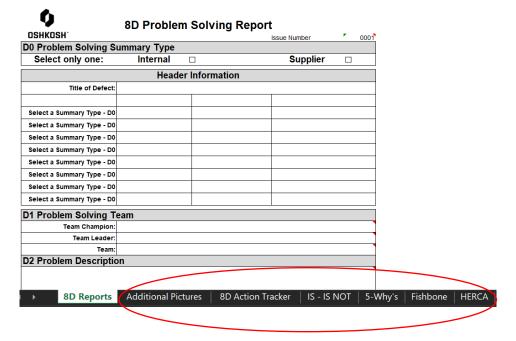


- D7) Problem solving team implements corrective actions on like parts and similar processes that could have the same problem.
- D7 should also be used to address major systemic issues identified during the investigation.
- D8) Problem solving team wraps up the 8D effort. Team champion ensures that the team members are congratulated for their efforts.

Note: Oshkosh initiator must approve the 8D in order to close it out.



## 8D Corrective Action – Oshkosh 8D Form



- The Oshkosh 8D form is in excel spreadsheet format.
- Several additional tool tabs are included in the spreadsheet:
  - Additional Pictures
  - 2. Action Tracker
  - 3. IS IS NOT Problem Description Worksheet
  - 4. 5-Why's Worksheet
  - 5. Fishbone Analysis Worksheet
  - HFRCA

# 8D Corrective Action – Defining the Problem

- A specific and accurate problem statement is the basis for solving any problem.
- Vague problem definitions make the problem-solving process impossible...
  - Part is bad
  - Paint looks bad
  - Part doesn't fit
- Suppliers are responsible for all steps of the 8D process.
  - The problem description should be updated as the investigation continues. For suppliers, one of the first steps of the 8D process is typically to investigate and expand the problem description provided to them by Oshkosh.



# 8D Corrective Action – Defining the Problem

• A complete problem description should describe: What? Where? When? How many?

What?	Where?
What is the part number?	Where was the problem detected?
What is the specific problem?	Who detected it?
When?	How many?
What is the scope? What lots/batches/shipments does it effect?	What is the quantity (and percentage) of the problem?

Example of a strong problem statement:

#### **D2 Problem Description**

Violation of 271828 (Weldment Brackets) 42.75" +/- 0.10 dimension on 3 repeated shipments (reject dates 5/12, 5/13, 5/27 from supplier Quick Machine Co). Quantity of rejects: 27 out of 27 pieces.

Rejected at Harrison Street assembly line on 5/30.

Sample of parts measures at 43.15".



# 8D Corrective Action – Root Cause Analysis

- Investigating until a strong root cause has been found is necessary for the 8D to prevent the problem from happening again.
- A few guidelines for root causes:
  - Do not just restate the problem statement. The root cause should identify how the process or design caused the defect.
  - Operator error IS NOT an acceptable root cause for significant issues. The underlying cause of the operator error should be addressed.
- 5 Why's is one of the simplest and most effective ways to find root cause.
  - Start with the problem description and keep asking "Why?" until the root cause has been identified.
  - At each stage, before asking "Why?" again, prove the answer to the last "Why?"



# GPSC Academy

Leaders Teach & Leaders Learn

