










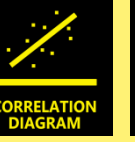














8D | SYSTEMATIC PROBLEM SOLVING

- › Mandatory activities
- › Optional activities

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STEP	WHAT HAS TO BE DONE?	TOOLS	RESULTS
D1  Teambuilding	<ul style="list-style-type: none"> › Name a person responsible for the problem solving process. The person must be trained in using the 8D method. › Specify the team members by name who are to provide specialist support to the person responsible 		<ul style="list-style-type: none"> › Team members have been chosen › Everyone can see who the contact persons are › The experts for this issue can be determined in the future when similar problems occur
D2  Describe and define the problem	<ul style="list-style-type: none"> › Describe the problem as precisely and completely as possible using Facts & Figures (What, Where, When, Which, How much, How critical, etc.) › Check whether it is a repeat failure › Conduct analyses to identify potential influencing factors, accumulations and correlations › Specify the problem via IS/IS NOT Analysis 	    	<ul style="list-style-type: none"> › Problem has been clearly and comprehensively described and quantified in open-ended terms regarding results › Problem scope has been defined
D3  Implement Containment Actions	<ul style="list-style-type: none"> › Block / sort out / rework inventories (parts / devices) › Stop production › Implement 100% inspection (on a temporary basis) › Place a Deviation Request for a Special Release › Report unsafe product (at Kärcher: K-Failure) › Initiate a product recall (at Kärcher: Service Bulletin Level 1) 	    	<ul style="list-style-type: none"> › Customer is no longer confronted with the problem (due to treating the symptoms of the problem) › Damage containment › “Buying time” for sustainable problem resolution
D4  Determine root causes	<ul style="list-style-type: none"> › Determine possible root causes of the problem › Use tools like 5-Why, Ishikawa and Gemba › Verify root causes by cross-referencing with Facts & Figures as well as the analyses from step D2 › Find out why the problem was not avoided or detected in the process 	    	<ul style="list-style-type: none"> › The root causes of the problem are known and verified › The reasons for non-avoidance or non-detection in the process have been found
D5  Define Corrective Actions and Verify their effectivity	<ul style="list-style-type: none"> › Define potential Corrective Actions › Failure <i>avoidance</i> is preferable to failure <i>detection</i> › Confirm effectivity of Corrective Actions via trials, tests, calculations, simulations, capability studies › Define Corrective Actions which will permanently eliminate the root causes 	    	<ul style="list-style-type: none"> › Corrective Actions have been defined › The effectivity of the actions in eliminating root causes has been confirmed
D6  Implement Corrective Actions	<ul style="list-style-type: none"> › Introduce / implement the defined Corrective Actions, anchor these within the organisation and update documents accordingly › Make sure that the actions have no undesired side effects › Set up an action plan for tracking the actions as necessary › Rework / replace inventories (parts, devices) › Roll back immediate actions (such as 100% inspection) 	    	<ul style="list-style-type: none"> › Corrective Actions are firmly anchored within the organisation › The problem no longer occurs › Side effects are ruled out › Inventory goods with failures are fixed
D7  Implement Preventive Actions	<ul style="list-style-type: none"> › Check if other products / devices / product versions / processes / plants may be affected by the same problem › Ensure that similar problems cannot or are not “pre-programmed” to reoccur in the future › Implement regular or temporary effectivity testing, such as via product audit, process audit or system audits 	    	<ul style="list-style-type: none"> › Transfer the gained knowledge into - existing products / processes - future products / processes / projects (Lessons Learned) › Weak points in the system / organisation eliminated
D8  Conclude the problem solving process	<ul style="list-style-type: none"> › Verify that all defined actions have been implemented › Verify that all relevant information has been documented › Inform all parties involved, affected or interested about successful conclusion of the process, sending an 8D report as appropriate › Organise rework at customers (Kärcher: Service Bulletin) › Thank the team members for their cooperation 	 	<ul style="list-style-type: none"> › Verify implementation of actions › Documentation is complete › The problem solving process is officially concluded and this has been communicated accordingly