

# 8D-Report

<b>Concern title</b> Axial run-out of precision ring NOK		<b>Complaint no.</b> 214999999 Supplier: 12345		<b>Complaint opening date</b>	
<b>Supplier</b> Sample supplier		<b>Production site</b> Sample city		<b>Revision 8D-Report</b> 04	<b>Revision Date</b>
<b>Drawing no.</b> F-123456789		<b>Drawing revision</b> AC		<b>Part name</b> Precision ring Ø20	
<b>Plant(s)</b> XYZ		<b>Quantity delivered</b> 100		<b>Quantity claimed</b> 12	
<b>1 Team</b> Name                      Contact                      (Email, Phone) Mayer F.                      Quality                      meyer@sample.com Mueller S.                      Production                      mueller@sample.com Huber A.                      R&D                      huber@sample.com  Champion Boss G.                      Q-Mgr.                      boss@sample.com			<b>2 Problem description</b> Axial run-out from face to inner bore Ø N.O.K. Nominal: 0,05		
<b>3 Corrective action(s)</b> 1. Check of stock: No parts on stock at present 2. Check customer stock: In the XYZ plant, another lot with the same defect was found. In the XYZ plant, no parts were on the stock. 3. Check of stock in transit to the customer: At present, there are no parts on the way to the customer The stock parts of similar types 18, 19, 21 were checked also for the claimed defect. No defects were found on these  Amendment: After return shipment, the complained delivery was sorted 100%. During the sorting, another 5 defective parts were found. We kindly ask you to adjust the ppm-relevant quantity in your ERP-system (actual defective quantity = 17).					<b>Implementation date</b>  2020-08-01 2020-08-02  2020-08-01 2020-08-01
<b>4 Root cause(s)</b> <input checked="" type="checkbox"/> First occurrence defect <input type="checkbox"/> Repetitive defect Root cause analysis for the creation of the defect (3x5 Why method applied): The root cause was detected as "wear of the ball screw spindle" in the face-grinding machine. The wear at the spindle head caused a play in the spindle guidance. When wearing the grinding-wheel the grinding pressure will rise and - in combination with the increasing play in the spindle guidance- lead to deviations in the axial run-out. Planned maintenance and check of this play was not part of the maintenance plan.  Root cause analysis for non-detection of the defect (3x5 Why method applied): The defect was not detected during the quality inspection (operator self-inspection) because the control plan defined the measurement of the axial runout in the machine chuck directly (simulation of the end customer application). During analysis, we found out that the parts measured directly in the chuck (thus an elastic deformation of the part) reach the required value for the run-out. When measuring the same parts out of the machine some do not reach the required value. Also, the point of time for the inspection was not defined and so not all produced parts showed the deviations. The root cause for this is the lower grinding pressure after dressing of the grinding wheel (after dressing the deviation of the run-out is at the lowest).					
<b>5 Chosen corrective action(s)</b>  Corrective actions regarding the creation of the defect: 1. Add check of spindle play in the maintenance plan 2. Check if regular moving of the spindle is leading to lower/ no wear of the spindle 3. Conduct clamping tests to identify the effect of the clamping force, if the necessary adjustment  Corrective actions regarding the detection of the defect: 1. Update control plan: Point of time for check changed to "before dressing" (biggest influence of the clamping pressure) 2. Purchase tapered gauges for measurement of axial run-out outside the machine 3. Update of control plan: Add additional check of axial run-out with tapered gauges				<b>5a Verification check by method of</b>  Check of the maintenance plan at the machine Tech. discussion machine manufacturer Empirical with different a clamp. forces  Check of revision in ERP-system Empirical check, series of measurement Check of revision in ERP-system	
<b>6 Implemented corrective action(s)</b>  Corrective actions regarding creation of the defect: 1. Check of spindle play added to the maintenance plan 2. Movement of the spindle head added to the maintenance plan 3. Process-FMEA no. M20-12345 updated, new revision = 03; clamping force added  Corrective actions regarding detection of the defect: 1. Control plan updated: Point of time for check changed to "before dressing" (biggest influence of the clamping pressure) 2. Tapered gauges purchased 3. Control plan updated: Additional check of axial run-out with new tapered gauges outside the machine chuck.					<b>Implementation date</b>  2020-08-10 2020-08-10 2020-08-17  2020-08-12 2020-08-17 2020-08-17

