FMEA - Step 6: AIAG* Severity Guidelines

EFFECT	CRITERIA: SEVERITY OF EFFECT	RANKING
Hazardous - without warning	May endanger machine or assembly operator. Very high severity ranking when a potential failure mode affects safe vehicle operation and/or involves noncompliance with government regulation. Failure will occur without warning.	10
Hazardous - with warning	May endanger machine or assembly operator. Very high severity ranking when a potential failure mode affects safe vehicle operation and/or involves noncompliance with government regulation. Failure will occur with warning.	9
Very High	Major disruption to production line. 100% of product may have to be scrapped. Vehicle/item inoperable, loss of primary function. Customer very dissatisfied.	8
High	Minor disruption to production line. Product may have to be sorted and a portion (less than 100%) scrapped. Vehicle operable, but at a reduced level of performance. Customer dissatisfied.	7
Moderate	Minor disruption to production line. A portion (less than 100%) of the product may have to be scrapped (no sorting). Vehicle/item operable, but some Comfort/Convenience item(s) inoperable. Customers experience discomfort.	6
Low	Minor disruption to production line. 100% of the product may have to be reworked. Vehicle/item operable, but some Comfort/Convenience item(s) operable at reduced level of performance. Customer experiences some dissatisfaction.	5
Very Low	Minor disruption to production line. The product may have to be sorted and a portion (less than 100%) reworked. Fit & Finish/Squeak & Rattle item does not conform. Defect noticed by most customers.	4
Minor	Minor disruption to production line. The product may have to be sorted and a portion (less than 100%) reworked. Fit & Finish/Squeak & Rattle item does not conform. Defect noticed by average customers.	3
Very Minor	Minor disruption to production line. The product may have to be sorted and a portion (less than 100%) reworked. Fit & Finish/Squeak & Rattle item does not conform. Defect noticed by discriminating customers.	2
Low	No effect.	1

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FMEA - Step 8: AIAG* Occurrence Guidelines

Probability of Failure	Possible Failure Rates	Ppk	Ranking
Very High:	≥ 1 in 2	≤ 0.33	10
Failure almost inevitable	1 in 3	≥ 0.33	9
High: Generally associated with pro-	1 in 8	≥ 0.51	8
cesses similar to previous processes that have often failed	1 in 20	≥ 0.67	7
Moderate: Generally associated with	1 in 80	≥ 0.83	6
processes similar to previous pro- cesses which have experienced	1 in 400	≥ 1.00	5
occasional failures, but not in major proportions	1 in 2,000	≥ 1.17	4
Low: Isolated failures associated with similar processes	1 in 15,000	≥ 1.33	3
Very Low: Only isolated failures associated with almost identical processes	1 in 150,000	≥ 1.50	2
Remote: Failure is unlikely. No failures ever associated with almost identical processes	≤ 1 in 1,500,000	≥ 1.67	1

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FMEA - Step 10: AIAG* Detection Guidelines

Detection	Criteria: Likelihood the Existence of a Defect will be Detected by Process Controls Before Next or Subsequent Process, or Before Part or Component Leaves the Manufacturing or Assembly Location	Ranking
Almost Impossible	No known control available to detect cause/mechanism of failure or the failure mode	10
Very Remote	Very remote likelihood current control will detect cause/mechanism of failure or the failure mode	9
Remote	Remote likelihood current control will detect cause/mechanism of failure or the failure mode	8
Very Low	Very low likelihood current control will detect cause/mechanism of failure or the failure mode	7
Low	Low likelihood current control will detect cause/mechanism of failure or the failure mode	6
Moderate	Moderate likelihood current control will detect cause/mechanism of failure or the failure mode	5
Moderately High	Moderately high likelihood current control will detect cause/mechanism of failure or the failure mode	4
High	High likelihood current control will detect cause/mechanism of failure or the failure mode	3
Very High	Very high likelihood current control will detect cause/mechanism of failure or the failure mode	2
Almost Certain	Current control almost certain to detect cause/mechanism of failure or the failure mode. Reliable detection controls are known with similar processes	1

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