Suggested Evaluation Criteria for Severity (S)

Effect	PFMEA SEVERITY of Effect on Product (Customer Effect)	Ranking	Effect	PFMEA SEVERITY of Effect on Process (Manufacturing Assembly Effect)
Failure to Meet Safety and/or Regulatory Requirements	Potential failure mode affects safe vehicle operation and/or involves noncompliance with government regulation without warning.	10	Failure to Meet Safety and/or Regulatory Requirements	May endanger operator (machine or assembly) without warning.
	Potential failure mode affects safe vehicle operation and/or involves noncompliance with government regulation with warning.	9		May endanger operator (machine or assembly) with warning.
Loss or Degradation of Primary Function	Loss of primary function (vehicle inoperable, does not affect safe vehicle operation).	8	Major Disruption	100% of product may have to be scrapped. Line shutdown or stop ship.
	Degradation of primary function (vehicle operable, but at reduced level of performance).	7	Significant Disruption	A portion of the production run may have to be scrapped. Deviation from primary process including decreased line speed or added manpower.
Loss or Degradation of Secondary Function	Loss of secondary function (vehicle operable, but comfort / convenience functions inoperable).	6	Moderate Disruption	100% of production run may have to be reworked off line and accepted.
	Degradation of secondary function (vehicle operable, but comfort / convenience functions at reduced level of performance).	5		A portion of the production run may have to be reworked off line and accepted.
Annoyance	Appearance or Audible Noise, vehicle operable, item does not conform and noticed by most customers (>75%).	4	Moderate Disruption	100% of production run may have to be reworked in station before it is processed.
	Appearance or Audible Noise, vehicle operable, item does not conform and noticed by many customers (50%).	3		A portion of the production run may have to be reworked in-station before it is processed.
	Appearance or Audible Noise, vehicle operable, item does not conform and noticed by discriminating customers (<25%).	2	Minor Disruption	Slight inconvenience to process, operation, or operator.
No Effect	No discernible effect.	1	No Effect	No discernable effect.

Chrysler LLC, Ford Motor Company, General Motor Corporation, June, 2008, "Potential Failure Mode and Effects Analysis – Reference Manual" - Automotive Industry Action Group, Page 88

Suggested Evaluation Criteria for Severity (S)

Rank	Probability of Failure
1	**Minor**: Unreasonable to expect that the minor nature of this failure would cause any real effect on the product and/or service. Customer will probably not even notice the failure.
2-3	**Low**: Low severity ranking due to nature of failure causing only a slight customer annoyance. Customer probably will notice a slight deterioration of the product and/or service, a slight in convenience in the next process, or minor rework action.
4-6	**Moderate**: Moderate ranking because failure causes some dissatisfaction. Customer is made uncomfortable or is annoyed by the failure. May cause the use of unscheduled repairs and/or damage of equipment.
7-8	**High**: High degree of customer dissatisfaction due to the nature of the failure such as an inoperable product or inoperative convenience. Does not involve safety issues or government regulations. May cause disruptions to subsequent processes and/or services.
9-10	**Very high**: Very high severity is when the failure affects safety and involves non-compliance with government regulations.

If the numerical value falls between two numbers *always* select the higher number.

If the team has a disagreement in the ranking value the following may help.

1. If the disagreement is an adjacent category, average out the difference. For example, if one member says 2 and someone else says 6, the ranking in this case should be 4.

2. If the disagreement jumps one category, then consensus must be reached. Even with one person holding out, total consensus must be reached. No average, no majority. Everyone in that team must have ownership of the ranking. They may not agree 100 %, but they can live with it.

Suggested Evaluation Criteria for Occurrence (O)

Rank	Probability of Failure	Possible Failure Rates		
		PPM*)	Failure rate	p_{pk}
1	**Remote**: Failure is unlikely. No failures ever associated with almost identical processes.	≤ 1	1 out of 1 000 000	≥ 1.67
2	**Very Low**: Only isolated failures associated with almost identical processes.	≤ 7	1 out of 150 000	≥ 1.50
3	**Low**: Isolated failures associated with similar processes.	≤ 64	1 out of 15 000	≥ 1.33
4-6	**Moderate**: Generally associated with processes similar to previous processes which have experienced occasional failures, but not in major proportions.	≤ 500 ≤ 2700 ≤ 12 500	1 out of 2000 1 out of 400 1 out of 80	≥ 1.17 ≥ 1.00 ≥ 0.83
7-8	**High**: Generally associated with processes similar to previous processes that have often failed.	≤ 50 000 ≤ 125 000	1 out of 20 1 out of 8	≥ 0.67 ≥ 0.51
9-10	**Very high**: Failure is almost inevitable.	≤ 333 000 ≥ 333 000	1 out of 3 ≥ 1 out of 2	≥ 0.33 < 0.33

*) Parts Per Million is the number of defects per one million defect opportunities

If the numerical value falls between two numbers *always* select the higher number.

If the team has a disagreement in the ranking value the following may help.

2. If the disagreement is an adjacent category, average out the difference. For example, if one member says 2 and someone else says 6, the ranking in this case should be 4.

3. If the disagreement jumps one category, then consensus must be reached. Even with one person holding out, total consensus must be reached. No average, no majority. Everyone in that team must have ownership of the ranking. They may not agree 100 %, but they can live with it.

Suggested Evaluation Criteria for Detection (D)

Rank	Probability of Failure Detection	Detection
1	Current control(s) almost certain to detect the failure mode. Reliable detection controls are known with similar processes.	Almost certain
2	Very high likelihood current control(s) will detect failure mode.	Very high
3	High likelihood current control(s) will detect failure mode.	High
4	Moderately high likelihood current control(s) will detect failure mode.	Moderately high
5	Moderate likelihood current control(s) will detect failure mode.	Moderate
6	Low likelihood current control(s) will detect failure mode.	Low
7	Very low likelihood current control(s) will detect failure mode.	Very low
8	Remote likelihood current control(s) will detect failure mode.	Remote
9	Very remote likelihood current control(s) will detect failure mode.	Very remote
10	No known control(s) available to detect failure mode.	Almost impossible

If the numerical value falls between two numbers *always* select the higher number.

If the team has a disagreement in the ranking value the following may help.

3. If the disagreement is an adjacent category, average out the difference. For example, if one member says 2 and someone else says 6, the ranking in this case should be 4.

4. If the disagreement jumps one category, then consensus must be reached. Even with one person holding out, total consensus must be reached. No average, no majority. Everyone in that team must have ownership of the ranking. They may not agree 100 %, but they can live with it.