LEAN METHODS GROUP

MISTAKE PROOFING MATRIX

21 MISTAKE PROOFING TECHNIQUES

1. Layout & Arrangement
2. Parcel Out
3. Positive Stop
4. Space Separation
5. Confirmation of Existence
6. Alternative use of Resources
7. Visual Management
8. Go/NoGo
9. Time Separation
10. Conditional Stop
11. Eliminate Replacement Alternative (ERA)
12. Kitting
13. 5S
14. Kanban
15. Templates
16. Checklists
17. Highlight
18. Information Transfer
19. Trend Prediction
20. Simplify Information
21. Document Control

SELECT POSSIBLE DEFECT / MISTAKE	SELECT SYSTEM WITH MISTAKE PROOFING OPPORTUNITY															
	Operating Stock	Fasteners	Code	Component	Assembly	Fixture	Tool	Manual Operation	Planning	Design	Automatic Operation	Connection	Safety	e-Forms	Paper Form	Decision
Alignment	6, 15, 8	1, 4, 13, 9		1, 7, 13	1, 16, 9	5, 16, 9	5, 16	1, 13, 15, 16	20, 17, 16	20, 17, 16	1, 13, 15, 16	1, 15, 13, 16	1, 3, 8	3, 7, 13	7, 13	17, 19
Scratches	5, 7	4, 9		4, 7, 5, 9	4, 7, 5, 9	4, 7, 5, 9	4, 7, 5, 9	4, 7, 5, 9	1, 7, 13	1, 4, 13	1, 8, 16	5, 4, 10, 9	8			
Contamination	5, 4, 9	12, 11, 4, 9		5, 4, 11, 9	5, 4, 11, 9	5, 4, 11, 9	5, 4, 11, 9	5, 4, 11, 9	1, 7, 16	5, 2	4, 10, 9	4, 5, 13, 9	2, 10, 16			
Non-Processed Parts	16, 13, 12, 9	12, 16, 9, 13	3, 17, 20	16, 13, 12, 9	16, 13, 12, 9	15, 16, 12, 9	13, 16, 12, 9	13, 16, 12, 9	1, 7, 16, 17	3, 7, 16	8, 10, 12, 13, 9	16, 5, 12, 9	2, 13, 8	8, 3, 17	15, 17	17, 19
Size	8, 15, 9	8, 15	20, 13, 11	8, 15	8, 15	16, 8	16, 8	16, 8, 9	1, 4, 16	4, 1	8, 12		8, 3			19
Weight	8, 5, 3	8, 5, 3		8, 5, 3	8, 5, 3	8, 5	8, 5	3, 4, 17, 9	1, 4, 16	6, 8, 10	8, 12, 9		8, 3			19
Holes	7, 5, 1	1, 15		7, 5	7, 5, 9	7, 5	7, 5	3, 4, 17, 9	1, 5, 14	1, 7, 10	5, 10	1, 8, 10	8, 3			
Mismatch	12, 17, 9	12, 15	16, 7	12, 15, 9	12, 15	16, 1	16, 1	16, 1, 9	1, 4, 15	1, 4, 8	16, 1	16, 13, 17	10, 8, 1	3	17	17, 19
Solvents Mix	16, 10, 9	16		16	16	16, 11	16, 11	4, 9	2, 12	2, 5, 12	16, 7, 6, 9		2, 3, 12, 9			16, 19
Cutting	3, 6, 1, 8, 17	1, 8		1, 8	1, 8	1, 8	1, 8	1, 8, 16, 9	1, 5, 15	1, 5, 16	1, 8, 16, 9	3, 8	1, 8, 10, 9			
Shaping	15, 1, 8	8		16, 15, 8	16, 15, 8	6, 15, 8	6, 15, 8	4, 17, 9	1, 17	1, 7, 15	1, 8, 10, 9	3, 8	10, 3, 7			
Bending	8, 1, 11, 9	8, 1, 11		8, 1, 11	8, 1, 11	8, 1, 11	8, 1, 11	4, 17, 9, 6	1, 10, 6	10, 7, 15	10, 8, 9, 16	3, 8	1, 3, 8			
Location	12, 15, 9, 4	1, 15, 12	1, 13, 16	12, 15, 1	12, 15, 1	12, 15, 1	12, 15, 1	16, 11, 9, 13	1, 5	1, 7	16, 11, 9, 13	16, 13, 1	1, 3, 8	1, 17, 13	1, 17, 14	13, 20, 16
Mounting Torque	10, 5, 16	10, 5, 16		10, 5, 16	10, 5, 16, 9	10, 5, 16	10, 5, 16	8, 10, 1, 9	5, 8, 17	16, 17, 7	10, 5, 3, 9	16, 5, 8	10, 3			
Wrong Placement	1, 15, 6, 17	1, 15	1, 16, 17	1, 16, 17	1, 16, 17	1, 16, 17	1, 16, 17	16, 11, 9, 13	20, 17, 16	20, 17, 16	16, 11, 9, 13	16, 1, 13, 8	1, 8, 15	17, 13, 5, 10	17, 13, 5, 10	5, 13, 17
Protrusions	8, 3	8, 5, 3		8, 5, 3, 9	8, 5, 3, 9	8, 5, 3, 9	8, 5, 3, 9	3, 17, 9	1, 5, 16	7, 8, 10	8, 5, 3, 9	3, 8, 9	5, 8			
Missing	12, 3, 15, 17	12, 15	17, 13	12, 15, 17	12, 15, 17	12, 15, 17	12, 15, 17	3, 17, 9	4, 7, 13	3, 15, 13	5, 8, 17, 9	7, 5, 16, 13	3, 2, 8	5, 17, 10	5, 17, 10	5, 7, 13, 16
Delay	17, 14	17, 14	5, 17	17, 14	17, 14	16	16	16, 11, 9, 13	20, 17, 16, 13	20, 17, 16, 13	16, 11, 9, 13	17, 16	3, 16, 15	3, 20, 18	20, 18	5, 7, 13, 19
Incorrect	5, 12, 17	5, 12, 17	17, 18, 21	5, 12, 17	5, 12, 17	5, 16	5, 16	16, 11, 13, 9	20, 17, 16, 13	20, 17, 16, 13	16, 11, 9, 13	16, 7, 8, 1, 13	16, 7, 8	5, 10, 17	5, 10, 17	5, 8, 19, 17, 16

Algorithm for Mistake Proofing

1. Select System to Mistake Proof
(X axis of matrix)

→

2. Select Potential Possible Defects
(Y axis of matrix)

→

3. Correlate X and Y
Correlated space contains #'s corresponding to mistake proofing principles commonly used to prevent that type of defect.

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4. Apply Principles to Mistake Proof System Against Possible Defect(s)

NOTES: 1. Repeat algorithm as necessary. **2.** Collect mistake proofing principles for each iteration. **3.** Coordinate mistake proofing activity—a single principle may prevent several defects.