FAILURE MODES & EFFECTS ANALYSIS														
System element Name							Main Project							
BMW G02 _ G08 Center Console Assembly							BMW G02_	G08						
Object	Object - ID	Part Number / Drawing Number /	Last Edit Date	Prepared By	FMEA Date	Editor	Revision Date	Туре	Status					
Center Console	BMW G02 _ G08	1356634/1356645		Cesar Rivera	14.09.2015	Jerod Williams	8/17/2019	Process	Current					
Moderator Comment				Responsible Department		Departments Concerned	Attribute							
Rodrigo Luna			Industrial Engineering											
FMEA Team Rodrigo Luna, Clemens Scholz, Jerod Williams, Qu	uitman Spalding, Jackie 1	urner, Samantha Shor	t, Colby Roberts											

## 45.1 Prefixing

no.	work step / procedure		potential effect of	C	-1		0	D	D	D	DOW	recommended	to be completed by	action taken		Action Re O	sults	PDNI	-
		potential failure mode Spacer Presence/Alignment	failure Unacceptable Trim	7 7	class	Cause of failure Operator Error/Documented	4	P-action 100% Visual	D-action Standardized Work Instructions	6	RPN 168	action 8/15/2019	& date	duun taken	5	U	U	RPN	Clos
		r-resence/Alignment	Appearance			Process not Followed		Inspection	HISTRUCTIONS										
		Marks, cuts, spacer	+						Boundary Sample			D: J.Williams/None			5	5	5	125	Clos
		mutilation, fines lines, etc																	
		Incorrect upper side panel version	Loss of Production	4	1	Operator Error/Documented	3	100% Visual Inspection	Detection System to Workstation to	5	60	12/1/2019	1	1					Оря
		(LHD/RHD)				Process not Followed		.,	detect variant(Proximity										
									Oriented)										
11	Obtain Upper Side Panel											D:J.Williams	12/1/2019		13	2	5	30	Оре
	Inspect/Install											Poke yoke system to detect correct USP	1				-		
		Incompanie 21	Delevised: /	*		David Facilities	,	det elece	December		140	version							C.
		Inappropriate Glue Processing	Delamination of Glue/Trim covers	7		Dryer Fault (Dryer time less than 20 min)	4	1st piece release	Preventive Maintenance		140	8/1/2019							Clo
						Glued USP idle for			Add Timers to WIP										
						more that 4+ hours			racks to monitor glue duration										
		Inappropriate Glue Application	Unacceptable Trim			Excessive Glue		100% Visual	Boundary Sample			D:J.Williams			5	5	6	150	Clos
		Application	Appearance(Bulges, Clumps, indents,etc)			Applied to USP		Inspection				Boundary Sample Implemented							
		Correct Trim Counc	Loss of	3	1	Operator	4	100% Visual	Add Tracophility	5	60	10/1/2019							000
		Correct Trim Cover Version (LHD,RHD,Color,	Loss of Production(Overprodu ction)	J		Operator Error/Documented Process not	*	Inspection	Add Traceability Scanner	3	00	10/1/2019							Оре
		material)				Followed													
.12	Obtain Trim Cover Inspect																		
	n apoor																		
									Boundary Sample Per Variant			D: J.Williams Scanner	10/1/2019		2	3	4	24	Op
		Misaligned to Unner	Scrap	6		Work Instruction	5	100% Visual	Standardized Work	4	120	Implementation 8/15/2019							Clo
		Misaligned to Upper Side Panel Trench	Остар			Not Followed	-	Inspection	Instructions	_	.20	G 13/2018							CIU
			Rework			Trim Defect from													
			Loss of Production			supplier Scrap/Rework/Reb			<u></u>			D.J.Williams/None			6	5	5	150	Clo
	Install Trim Middle Seam					uild													
13	To Upper Side Panel	Damage to Middle Seam (Hanging	Scrap			Work Instruction Not Followed	3	100% Visual Inspection	Standardized Work Instructions		72	8/15/2019			1				Clo
		Threads, Wavy, Busted, etc.)																	
			Rework			Trim Defect from supplier													
			Loss of Production			Scrap/Rework/Reb						D.J.Williams/None			6	4	3	72	Clos
						uild													
		Busted/Damaged Seams	Scrap	4		Seams Not Completely Seated	4	100% Visual Inspection		4	64	10/1/2019				'			Оре
						To Trench													
	Install Fixture Clamps to	Clamp Malfunction	Cycle Time Malfunction			Operator readapts to new process		Accessory tools to simplify process	+										
.14	Install Fixture Clamps to Middle Trim Seams																		
			Inappropriate Alignment			Trim Seams Not Completely			Laser addition to monitor clamp			D.J.Williams Contact Vendor for			4	3	4	48	Оре
						Compressed(Clam p Broken)						price quotation							
		Burned Material	Unacceptable Trim Appearance	6	1	Heat Gun Overheated (350+/-	4		Label Gun with Temp Limits	5	120	8/15/2019	1		ш				Clos
						10 Degrees F)			. comp collido										
									1										
15	Install Heat To Trim		Form, Fit, And Trim Function					1st Piece Ok											
								Start set-up Check	+			D.J.Williams			5	3	4	60	Clo
								Sheet				/Closed							
		Bubbles,	Scrap	9	-	Operator Error	5	100% Visual	Standardized Work	7	315	8/15/2019							Clo
		Creases,Wrinkles, Waviness, etc.						Inspection	Instructions										
.16	Apply Trim to Upper Side Panel		Rework			Work Instruction Not Followed			≥120V LED Light Bulbs Per										
	1				1				Assembly		1								1

Control   Cont			1					1								
Part				Loss of Production							D.J.Williams /Closed		9	6	4 216	Closed
March   Marc			Wrinkles	Scrap	8	Operator Error 4	100% Visual	≥120V LED Light	6	192	8/15/2019	1				Closed
Comment							rispection									
Comment																
Control   Cont				Rework		Work Instruction Not Followed	Implement Finesse Tools	Standardized Work Instructions			D.J.Williams /Closed		8	4	5 160	Closed
Control   Cont																
County   C			Waviness	Scrap	4	Glue Application 5	100% Visual	≥120V LED Light	4	80	8/15/2019					Closed
State Adjusted   State   Sta							inspection	Bulbs Per Assembly								
Part   Dispose   Part						Operator Error										
Part   Dispose   Part																
Prince   P						Work Instructions Not followed		Standardized Work Instructions			D.J.Williams /Closed		3	4	48	Closed
Prince   P																
Substantial Control   Substantial Control   Substantial Control Control   Substantial Control Control   Substantial Control			Seam Alignment	Scrap	5	Clamp Malfunction 4	100% Visual Inspection	Standardized Work Instructions	5	100	8/15/2019					Closed
Substant Course   Substant C																
Property   Color Content Color   Color Content Color   Color Color Color Color   Color C				Rework	1	Operator Error					D.J.Williams /Closed		4	3	4 48	Closed
Property   Color Content Color   Color Content Color   Color Color Color Color   Color C																
Contraction			Bubbles,Clumps	Scrap	6	Excessive Glue Applied to USP	100% Visual Inspection	Boundary Sample	+	0	8/15/2019	-				Closed
Flamework																
Flamework																
Advance in Que   County   County						Glue Contaminated		Standardized Work Instructions								
Manufacture to Que   Closed																
Manufacture to Que   Closed						Excessive	Glue Change Log	-			D.J.Williams		5	5	4 100	Closed
Removal happen Make to to Windows   Removal happen Make to Windo						Hardener In Glue					/Closed					
Removal hospectified by the Properties of Policy   Properties   Prop			Cuts.Marks.Indents.	Scrap	4	5s/Safety 4	100% Visual	Standardized Work	4	64	8/15/2019					Closed
Teoling		Romano/Inspect/Mayo to	Etc.			Compliance Not	Inspection	Instructions								
D_JWilliams	45.17	Wip														
D_JWilliams																
Hanging Threads   Rework   6   Supplier Issue   4   100% Visual Inspection   100% Visual Inspection   120   615/2019   Closed   Closed   120   615/2019   Closed   Clo				Rework		Tooling										
Hanging Threads   Rework   6   Supplier Issue   4   100% Visual Inspection   100% Visual Inspection   120   615/2019   Closed   Closed   120   615/2019   Closed   Clo																
Hanging Threads   Rework   6   Supplier Issue   4   100% Visual Repection   100% Visual Visual Repection   100% Visual Vis						Operator France					D. I.Williams	1	19 1	4 [	4 140	Closed
Seams Mishandled Seams Mishandled Privated Cutting Scissor Implement Butto For Assembly Closed  Delamination Of Foil Scrap 9 PoorNo Plasma 4 100% Visual Instructions  Direct Grease/Trim Scrap 6 Band handling of 6 100% Visual Instructions  Band handling of 6 100% Visual Instructions  Reversit  Closed  D.J.Williams (Closed)						Operator Error					/Closed		3	•	* 40	Ciosea
PoorNo Plasma   4   100% Visual   Priventifun   Priventi																
PoorNo Plasma   4   100% Visual   Priventifun   Priventi			Hanging Threads	Rework	6	Supplier Issue 4	100% Visual	Standardized Work	5	120	8/15/2019					Closed
by operator Scissor implement Bulbs Per Assembly Closed Cl							Inspection	Instructions								
Delamination Of Foil Scrap 9 Poor/No Plasma Treatment Uniper Malfunction Dryer Malfunction Dryer Malfunction Dryer Malfunction Glue Change Log DJ.Williams Closed Din/Grease/Trim Mudiation Scrap 6 Parts Scrap 6 Parts Scrap Operator Error Scrap Scrap DJ.Williams DJ.Willia																
Treatment Inspection Instructions    Dryer Mailunction   Preventive Maintenance						Seams Mishandled by operator	Thread Cutting Scissor Implement	≥120V LED Light Bulbs Per Assembly			D.J.Williams /Closed		4	5	4 80	Closed
Treatment Inspection Instructions    Dryer Mailunction   Preventive Maintenance																
Dryer Malfunction  Glue Change Log  Glue Change Log  Din/Grease/Trim Multilation  Scrap  6  Bad handling of Parts  Scrap  6  Bad handling of Parts  Scrap  Closed  Din/Grease/Trim Multilation  Scrap  Bad handling of Parts  Scrap  Closed  D.J.Williams			Delamination Of Foil	Scrap	9	Poor/No Plasma 4	100% Visual	Standardized Work	7	252	8/15/2019	1				Closed
Glue Change Log   D.J.Williams   9   4   6   216   Closed						· · eaution	= rapecuol1	su ucuuris								
Glue Change Log   D.J.Williams   9   4   6   216   Closed						Dryer Malfunction		Preventive								
Din/Grease/Trim Mullation Scrap 6 Bad handling of 6 100% Visual Inspection Instructions Instructions Rework Operator Error 2120V LED Light D.J.Williams 5 4 5 100 Closed								Maintenance								
Din/Grease/Trim Mullation Scrap 6 Bad handling of 6 100% Visual Inspection Instructions Instructions Rework Operator Error 2120V LED Light D.J.Williams 5 4 5 100 Closed							Gluo Chessel -				D. I.Williams	1	10 1	4 1	e lara	Cl
							Glue Criange Log				/Closed		э	*	216	Ciosed
Rework Operator Error State Per Assembly D.J.Williams Closed D.J.Williams Closed			Dirt/Grease/Trim Mutilation	Scrap	6	Bad handling of Parts 6	100% Visual Inspection	Standardized Work Instructions	6	216	8/15/2019	•	•	-		Closed
Rework Operator Error S120V LED Light Bulbs Per Assembly D.J.Williams Closed 5 4 5 100 Closed																
				Rework	1	Operator Error		≥120V LED Light Bulbs Per Assembly			D.J.Williams /Closed		5	4	5 100	Closed