# POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

	Design FMEA	X Process FMEA	Χ	Delphi Confidential

Part Certification

System	Χ	Subsystem		Con	nponent		Pag 1	e		FMEA Number AUTO FLEX (e	-FMEA DOC ID	5097752)		
art Number Jelphi:33386295)		•	Design or Process Responsibili BRIONES, DIEGO ALBERTO	ty				pared by AMEA, PEDRO N		Telephone # +52 844 41155	00			
odel Year(s)/Vehicle(s) DMPONENT			Key Date 2019-07-02 00:00:00				Orig 201	ginal FMEA Date 9-06-27 00:00:00		FMEA Revision 2019-06-27 11:	Date 20:01			
663400 VIELMA, EDUARDO A, ME ENGIN	ODUCTION CO EER - ELECTE	ONTROL SUPERVISO RICAL +52 844 43890	OR +52 844 4115500 RAMIRE 60 GARCIA, ABRIL, ASSOC	Z, F	ABIAN I TOMER	NERAL SUPERVISOR +52 844 4115500 BRIONES, DIEGC HORACIO, QUALITY ENGINNER +52 844 4115500 HERNA SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ: 4 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEERING	ANDE	BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844 Z. LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +5 ME, ASSOC CUSTOMER SATISFACTION ADMIN HINICIAN JULI ORTIZ URIBSE, DIEGO A. TECNICO DE	2 84	Supervisor's RUBIO, BER		esults	_	
ANTENIMIENTO 3480 MORALES, OSCAR	R IVAN, PROCI	ESS TECHNICIAN PL	ANT 8400 CENTEC 3 +52 84 48	6634	100 Z	ARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	+52 8	844 4389060	-11				_	_
Item/Process Function Requirements	Potentia	al Failure Mode	Potential Effect(s) of Failure	S e v	C – a s s	Potential Cause(s)/ Mechanism(s) of Failure	0 0 0	Current Design/Process Controls	D R e P t N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	S O c v c	D e t
10) RECEIVING MATERIAL IN DOCKS	SUSPE	CT MATERIAL	ASSEMBLY PROBLEMS	6	N/A	SUPPLIER PROBLEMS	2	(D) -VISUAL INSPECTION TO VERIFY THE CONTAINER CONDITION ACCORDING WORK INSTRUCTION - MATERIALS DEPARTMENT INSPECTS AND SEGREGATE DAMAGE MATERIAL -INSPECTION BY INCOMING INSPECTION BY	7 84	1 None			Ī	
10.1)	DAMAGE	D COMPONENT	-RAW MATERIAL CAN NOT BE USED -ASSEMBLY PROBLEM	6	N/A	-INCORRECT HANDLING DURING TRANSPORTATION - OPEN CONTAINER	2	(P) -CLOSED CONTAINER AND BOX -DOCK OPERATOR (D)VERIFY CONTAINER OR BOX IN GOOD CONDITION - VISUAL AID DISPLAYED	7 84	4 None				П
10.11)	DAMAG	GED MATERIAL	ASSEMBLY PROBLEMS	6	N/A	IMPROPER MATERIAL HANDLING	2	(D) -VISUAL INSPECTION TO VERIFY THE CONTAINER CONDITION ACCORDING WORK INSTRUCTION - MATERIALS DEPARTMENT INSPECTS AND SEGREGATE DAMAGE MATERIAL -INSPECTION BY INCOMING INSPECTION BY	7 84	1 None			T	
20) VISUAL INSPECTION OF MATERIAL RECEIVED TO VERIFY PHYSICAL CONTAINER CONDITION AND COMPARE AGAINST MANIFEST	MISS	SING LABEL	RAW MATERIAL CAN NOT BE USED	4	N/A	-INCORRECT HANDLING DURING TRANSPORTATION - MISSING LABEL FROM SUPPLIER	2	(D) VISUAL INSPECTION AGAINST MANIFEST ACCORDING TO WORK INSTRUCTION	7 56	6 None			Ī	
20.1)	ILLEG	GIBLE LABEL	RAW MATERIAL CAN NOT BE USED	4	N/A	-DAMAGE DURING TRANSPORTATION -PRINTING PROBLEMS	3	(D) VISUAL INSPECTION AGAINST MANIFEST AND MATERIAL IS SEGREGATED ACCORDING THE WORK INSTRUCTION	3 36	6 None				
20.11)	MISSING	MANIFESTED ONTAINER	-AFFECTS INVENTORIES - INTERRUPTED MANUFACTURING FLOW	1	N/A	MISSING FROM SUPPLIER -LOST DURING TRANSPORTATION	2	(D) VISUAL INSPECTION WITH MANIFEST, DISCREPANCY IS GENERATED ACCORDING THE WORK INSTRUCTION - SCANNING	3 6	None				
20.12)	DAMAG	E CONTAINER	SUSPECT MATERIAL	4	N/A	-DAMAGE DURING TRANSPORTATION -INCORRECT HANDLING DURING TRANSPORTATION -BAD STACKED	4	(D) -VISUAL INSPECTION TO VERIFY THE CONTAINER CONDITION ACCORDING WORK INSTRUCTION - MATERIALS INSPECTS AND SEGREGATE DAMAGE MATERIAL -INSPECTION BY INCOMING INSPECTION	7 11	2 None				
20.13)		UNDER QUALITY ALERT	SUSPECT MATERIAL	4	N/A	-SUPPLIER REPORTS -MATERIAL OUT OF SPECIFICATION	2	(D) VISUAL INSPECTION ACCORDING TO WORK INSTRUCTION AND MATERIAL IS SEGREGATED TO BE SORTED OR RETURNED TO THE SUPPLIER QUALITY ALERT LIST FOR SUSPECT MATERIAL	7 56	6 None				
20.14)	DAMAG	SED MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING INCORRECT FROM SUPPLIER	2	(D) VISUAL INSPECTION TO VERIFY THE CONTAINER CONDITION ACCORDING WORK INSTRUCTION - MATERIALS DEPARTMENT INSPECTS AND SEGREGATE DAMAGE MATERIAL -INSPECTION BY INCOMING INSPECTION BY	7 56	6 None				
25) CHECK OF THE AMOUNT OF RAW MATERIAL IN PARTS UNIQUE BOUGHT	MISSING	VERIFICATION	DISCREPANCY IN INVENTORY	4	N/A	SUPPLIER	2	(P) INSTRUCTION, WORK INTRUCTION OPERADOR CERTIFICATE	7 56	6 None			T	
) LOAD MATERIAL IN SYSTEM (SAP/QAS)	MIS	SING LOAD	-DISCREPANCY IN THE INFORMATION -AFFECTS INVENTORIES	1	N/A	-IMPROPER INFORMATION HANDLING -MISSING OPERATION	2	(P) -WORK INSTRUCTION FOR MATERIALS OPERATOR - (D)SCANNING OF THE MATERIAL	4 8	None				
40) MOVE MATERIAL FROM RAMP TO SUPERMARKET AREA OR MATERIAL SUSPECT/ UNDER QUALITY ALERT TO INCOMING INSPECTION	DAMAG	GED MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) -OPERATOR METHOD	7 56	6 None			Ī	
40.1)	MIXE	D MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) -OPERATOR METHOD -CERTIFICATED OPERATOR	7 56	6 None				
) MOVE MATERIAL SUSPECT OR UNDER QUALITY ALERT TO INCOMING INSPECTION AREA	MIXTE	ED MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	-INCORRECT HANDLING OF THE MATERIAL	2	(P) WORK INSTRUCTION FOR MATERIALS OPERATOR	8 64	4 None			Ī	
41.1)	DAMAG	GE MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) WORK INSTRUCTION FOR MATERIALS OPERATOR	8 64	4 None			I	
42) MATERIAL ARE INSPECTED IN INCOMING INSPECTION AREA	DAMAGE O	R MISSING LABEL	PROBLEM TO SCAN THE CUSTOMER INFORMATION	4	N/A	-INCORRECT HANDLING -PROBLEMS OF SUPPLIER	2	(D) -VISUAL INSPECTION BY OPERATOR OF INCOMING INSPECTION AREA	3 24	4 None				
42.11)	DAMAG	E CONTAINER	SUSPECT MATERIAL	4	N/A	DAMAGE DURING TRANSPORTATION - INCORRECT HANDLING - BOXES WRONG ALLOCATED	2	(D) VISUAL INSPECTION TO VERIFY THE CONTAINER CONDITION ACCORDING WORK INSTRUCTION - MATERIALS INSPECTS AND SEGREGATE DAMAGE MATERIAL -VISUAL AID DISPLAYED -INSPECTION BY INCOMING INSPECTION	7 56	6 None				
42.13)	DAMAG	GED MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING -INCORRECT FROM SUPPLIER	3	(P) WORK INSTRUCTION FOR MATERIALS OPERATOR	7 84	4 None			T	П

Part Certification

# POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

		Design FMEA		Process FMEA	X Delp Con	phi Ifidential
X	Subsystem		Component	Page 1	FMEA Number AUTO FLEX (e-FMEA DOC ID 5097752)	

System	X	Subsystem		Coi	mponent		1		l	AUTO FLEX (e-	-FMEA DOC ID 50	)97752)		
Part Number (Delphi:33386295)	1		Design or Process Responsibili BRIONES, DIEGO ALBERTO	ity			Pre <sub>l</sub>	pared by AMEA, PEDRO N		Telephone # +52 844 411550	00		_	
Model Year(s)/Vehicle(s) COMPONENT			Key Date 2019-07-02 00:00:00				Orig	inal FMEA Date 9-06-27 00:00:00		FMEA Revision 2019-06-27 11:2	Date 20:01			
Core Team CHAVARRIA, VICTOR, ME SUPERVISOR - MI 4389060 LOPEZ, ADRIAN G, MOLDING PR 8663400 VIELMA, EDUARDO A, ME ENGIN 1452 AREVALO, VICTOR, RELIABILITY 4-11	RODUCTION CO NEER - ELECTR 1-55-00 SIBAI	NTROL SUPERVISC ICAL +52 844 43890 MEA, PEDRO N, ME	RZA, RAQUELINE V, SR OPEF IR +52 844 4115500 RAMIRI 60 GARCIA, ABRIL, ASSOC SUPERVISOR - ENGRG SUPP	EZ, F CUS PORT	ABIAN I TOMER +52 84	HORACIO, QUALITY ENGINNER +52 844 4115500 HERNA SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ, S	O ALE	BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844 Z, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +: ME, ASSOC CUSTOMER SATISFACTION ADMIN HNICIAN JULI   ORTIZ URIBE, DIEGO A., TECNICO DE	52 844	Supervisor's RUBIO, BER	Approval	ults		
Item/Process Function Requirements	Potential	l Failure Mode	Potential Effect(s) of Failure	S e v	C I a s s	Potential Cause(s)/ Mechanism(s) of Failure	000	Current Design/Process Controls	D R e P t N	Recommended Actions		ctions Γaken	S O e c v c	D e t
42.14)		T SPECIFICATIONS RIBUTES)	RAW MATERIAL CAN NOT BE USED	4	N/A	INCORRECT FROM SUPPLIER	3	(D) VERIFICATION ACCORDING THE DRAWING VISUAL INSPECTION	7 84	None			T	Ħ
43) MATERIAL INSPECTED IS MOVED RAMPS OR MNC IS SCRAPED OR RETURNED TO THE SUPPLIER		) MATERIAL	-RAW MATERIAL CAN NOT BE USED -ASSEMBLY PROBLEM	1	N/A	-INCORRECT HANDLING DURING TRANSPORTATION - OPEN CONTAINER	2	(D) CLOSED CONTAINER AND BOX -DOCK OPERATOR VERIFY CONTAINER OR BOX IN GOOD CONDITION - VISUAL AID DISPLAYED	7 14	None		寸	Ť	П
43.1)	MATERI. IDENT	AL WITH OUT FIFICATION	-RAW MATERIAL CAN NOT BE USED -ASSEMBLY PROBLEM	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) WORK INSTRUCTION	8 64	None			Τ	
50) STORE MATERIAL IN SUPERMARKET / SHOP STOCK AREA	WRONG	G MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	INCORRECT ALLOCATION -SIMILAR COMPONENT	2	(P) WORK INSTRUCTION FOR MATERIALS OPERATOR	8 64	None			Т	П
50.1)	DAMAG	E MATERIAL	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) WORK INSTRUCTION FOR MATERIALS OPERATOR	8 64	None			T	П
50.12)	MATERIAL MI	ISSING ALLOCATE	RAW MATERIAL CAN NOT BE USED	4	N/A	P/N NEWS -LACK OF CAPACITY IN SUPERMARKET	2	(P) OPERATOR METHOD STORE -SAP SYSTEM -MAP OF LOCATION	3 24	None			T	П
50.13)	MATERIAL W	RONG ALLOCATE	RAW MATERIAL CAN NOT BE USED	4	N/A	IMPROPER MATERIAL HANDLING	2	(P) OPERATOR METHOD STORE -SAP SYSTEM -MAP OF LOCATION	3 24	None			$\top$	Ħ
60) PRINT SHIPPING LABELS AND PROCESS CARD ACCORDING TO THE REQUERIMENTS	WRONG INFO	PRMATION (LABEL)	WRONG DESTINY CUSTOMER INSATISFACTION	5	N/A	WRONG INFORNARTION LOADED	2	(D) -VISUAL INSPECTION BY MATERIALS OPERATOR	8 80	None			T	П
60.1)		NFORMATION ESS CARD)	WRONG DESTINY CUSTOMER INSATISFACTION	5	N/A	WRONG INFORNARTION LOADED	2	(D) -VISUAL INSPECTION BY MATERIALS OPERATOR	8 80	None				
60.11)	ILLEG	IBLE LABEL	PROBLEM TO SCAN THE CUSTOMER INFORMATION	5	N/A	PRINTING PROBLEM	2	(D) VISUAL INSPECTION BY MATERIALS OPERATOR	8 80	None			T	
60.12)	DAMA	GED LABEL	PROBLEMS TO SCAN THE SHIPPING LABEL	5	N/A	IMPROPER HANDLING	2	(D) VISUAL INSPECTION BY MATERIALS OPERATOR	8 80	None			Т	П
70) MOVE SHIPPING LABELS TO WORK STATION (WHEN APPLY)	SHIPPING	LABEL MIXED	ASSEMBLY PROBLEM	4	N/A	IMPROPER HANDLING	2	(P) OPERATOR METHOD -D-VISUAL INSPECTION OF SERVICE OPERATOR	7 56	None			T	П
70.1)	MISSING S	HIPPING LABEL	ASSEMBLY CAN NOT BE BUILD	4	N/A	INCORRECT HANDLING LOOSING DURING TRANSPORTATION	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	7 56	None			T	П
70.11)	DAMA	AGE LABEL	LABEL CAN NOT BE USED	5	N/A	INCORRECT HANDLING	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	8 80	None			T	П
80) BUILD THE KIT ACCORDING TO THE REQUIREMENTS (WHEN APPLY)	WRC	NG TOOL	-ASSEMBLY PROBLEM	3	N/A	MISS OPERATION	2	(P) -OPERATOR METHOD	7 42	None		一	T	П
80.1)	WRONG	G MATERIAL	-ASSEMBLY PROBLEM	5	N/A	MISS OPERATION	2	(P) -OPERATOR METHOD	8 80	None		工	I	Ħ
80.11)		HIPPING LABEL	-ASSEMBLY PROBLEM	2	N/A	MISS OPERATION	2	(P) OPERATOR METHOD	7 28	None			4	$\sqcup$
80.12)		TIFICATION OF THE ATERIAL	-ASSEMBLY PROBLEM	3	N/A	INCORRECT HANDLING	2	(P) -OPERATOR METHOD	/ 42	None				
80.13)		MATERIAL	-ASSEMBLY PROBLEM	5	N/A	MISS OPERATION	2	(P) OPERATOR METHOD	8 80	None			I	П
80.14)	WRON	IG METHOD	MANUFACTURING FLOW INTERRUMPED INCORRECT ASSEMBLY	6	N/A	MISS OPERATION	2	(P) OPERATOR METHOD	8 96	None				
85) TO REQUEST SHIPPING LABEL FROM KIT PART NUMBER (WHEN APPLY)	WRONG I	INFORMATION	MANUFACTURING FLOW INTERRUMPED	6	N/A	MISS OPERATION	2	(P) OPERATOR METHOD	7 84	None				LĪ
90) MOVE MATERIAL, AND TOOL FROM KIT'S CENTER TO WORK STATION ACCORDING TO THE REQUIREMENTS (WHEN APPLY)	DAMAGE	COMPONENT	ASSEMBLY PROBLEM	5	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION - OPERATOR METHOD	8 80	None				
90.1)	DAMA	GED TOOL	ASSEMBLY PROBLEM	5	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION - OPERATOR METHOD	7 70	None				
90.11)	DAMAGED :	SHIPPING LABEL	SHIPPING LABEL CAN NOT BE USED	5	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION - OPERATOR METHOD	8 80	None		$\Box$		П
100) MOVE MATERIAL, PACKING MATERIAL AND TOOL OF THE P/N CHANGE FROM WORK STATION TO KIT'S CENTER OR PACKING CAR (WHEN APPLY)	DAMAGE	COMPONENT	ASSEMBLY PROBLEM	5	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION - OPERATOR METHOD	8 80	None		寸	Ī	П
100.1)	DAMA	GED TOOL	ASSEMBLY PROBLEM	5	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION - OPERATOR	8 80	None		T	Т	П

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Design FMEA	Process FMEA	X Delphi Confidential

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System	Х	Subsystem		Cor	nponent		Pag 1	ie .		FMEA Number AUTO FLEX (6	9-FMEA DOC ID	5097752)		
art Number Delphi:33386295)			Design or Process Responsibil BRIONES, DIEGO ALBERTO	ity			Pre SIB	pared by AMEA, PEDRO N		Telephone # +52 844 41155	500			
odel Year(s)/Vehicle(s)			Key Date					ginal FMEA Date		FMEA Revision				
63400 VIELMA. EDUARDO A. ME ENGI	NEER - ELECTF	RICAL +52 844 43890	60 GARCIA. ABRIL. ASSOC	CUS	TOMER	NERAL SUPERVISOR +52 844 4115500 BRIONES, DIEGO IORACIO, QUALITY ENGINNER +52 844 4115500 HERNA SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ, S 4 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEERING	O ALI ANDE	9-06-27 00:00:00  BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844  Z, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +6 ME, ASSOC CUSTOMER SATISFACTION ADMIN  HNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE	52 844	Supervisor's RUBIO, BEF	Approval	eulte		_
ANTENIMIENTO 3480 MORALES, OSCA	AR IVAN, PROCE	ESS TECHNICIAN PL	ANT 8400 CENTEC 3 +52 84 4	3663	+52 84 400 Z	ARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	+52	844 4389060			Action ite	Jourto		
Item/Process Function Requirements	Potentia	al Failure Mode	Potential Effect(s) of Failure	S e v	C – a s s	Potential Cause(s)/ Mechanism(s) of Faillure	0 0 0	Current Design/Process Controls	D R P t N	Recommended Actions	Responsibility & I Target Completion Date	Actions Taken	S e v	D D c e t
105) TRANSFER MATERIAL FROM UPERMARKET AND SHOP STOCK SLOCK (SLOCK 1) TO WIP SLOCK (SLOCK 2) IN SAP/QAS SYSTEM (SCANNING)	MISSIN	IG SCANNING	AFFECTED INVENTORY MANUFACTURING FLOW INTERRUPTED	4	N/A	MISS OPERATION	2	(P) -OPERATOR METHOD	7 56	None None				I
105.1)		IAL WITH OUT TIFICATION	MANUFACTURING INTERRUMPED FLOW	4	N/A	INCORRECT HANDLING OF THE MATERIAL	2	(P) -OPERATOR METHOD	7 56	None				
110) MOVE COMPONENT FROM SUPERMARKET, PARTS PURCHASED HOP STOCK AND MOLDING SHOP STOCK AREA TO WORK STATION	DAMAGE	D COMPONENT	ASSEMBLY PROBLEM	4	N/A	INCORRECT HANDLING DURING TRANSPORTATION	2	(P) USE OF CAR FOR TRANSPORTATION (D)-SERVICE OPERATOR VERIFY CONTAINER GOOD CONDITION PERMITED AMOUNT OF STACK MATERIAL IS INDICATED TO SERVICE	8 64	None				T
110.1)	MIXED	COMPONENT	-RAW MATERIAL CAN NOT BE USED -ASSEMBLY PROBLEM	4	N/A	-INCORRECT HANDLING DURING TRANSPORTATION	3	(P) -SERVICE OPERATOR METHOD	8 96	None				8
110.11)	WRONG	COMPONENT	-RAW MATERIAL CAN NOT BE USED -ASSEMBLY PROBLEM	4	N/A	-INCORRECT HANDLING DURING TRANSPORTATION	2	(P) -SERVICE OPERATOR METHOD	8 64	None				Ī
140) MOVE BOXES, RETURNABLE ONTAINERS FROM SUPERMARKET AREA TO WORK STATION	DAMAG	E CONTAINER	CONTAINER CAN NOT BE ISED	2	N/A	INCORRECT HANDLING	2	(P) -TRANSPORTATION IN CARS -OPERATOR METHOD	8 32	None				T
140.1)	DIRTY	CONTAINER	CONTAINER CAN NOT BE USED	2	N/A	INCORRECT HANDLING	2	(P) CONTAINER MUST BE CLEAN BY MATERIAL S OPERATOR BEFORE BE USED ACCORDING TO THE OPERATOR METHOD	8 32	None				Ī
140.11)	WRONG CO	INTAINER OR BOX	CONTAINER CAN NOT BE USED	2	N/A	MISS OPERATION	2	(P) -MATERIAL OPERATOR METHOD	8 32	None				T
145) MOVE FINISHED GOOD FROM COMPLETE CONTAINER AREA TO WORK STATION (WHEN APPLY)	INCOMPLE CONTAINER	TE FINISH GOOD INVENTORY HIGH	OVER STOCK	1	N/A	MISS OPERATION	2	(P) -WORK METHOD	8 16	None			T	T
150) VERIFICATION OF SET-UP BY MANUFACTURING	INCORREC	CT VERIFICATION	MANUFACTURING FLOW INTERRUMPED	2	N/A	INCORRECT INFORMATION USE	2	(D) VERIFICATION OF SET-UP ROUTINE	7 28	None				T
150.1)	MISSI	NG METHOD	INTERRUPTED MANUFACTURING FLOW	6	N/A	INCORRECT HANDLING OF METHOD	2	(D) -MANUFACTURING INSPECTION	8 96	None			T	T
150.2)	WRONG OR B	BAD STATE METHOD	INTERRUPTED MANUFACTURING FLOW	6	N/A	MISS OPERATION	2	(D) -MANUFACTURING INSPECTION	8 96	None			T	T
150.3)	NOT RELE	ASED METHODS	INTERRUPTED	6	N/A	MISS OPERATION	2	(D) -MANUFACTURING INSPECTION	8 96	None			T	T
150.4)	ASSE	EMBLY OUT	MANUFACTURING FLOW MATERIAL CAN NOT BE USE	6	N/A	INCORRECT FROM SUPPLIER	2	(P) OPERATOR METHOD TRAINING OPERATOR	8 96	None			$\dagger$	十
150.5)	WRONG O	R DAMAGE TOOL	ASSEMBLY PROBLEMS	6	N/A	MISS OPERATION INCORRECT HANDLING OF THE TOOL		(P) OPERATOR METHOD TRAINING OPERATOR	8 96	None			1	士
150.51)	WRONG EQ	OR DAMAGE UIPMENT	ASSEMBLY PROBLEMS	6	N/A	MISS OPERATION INCORRECT HANDLING OF THE TOOL	. 2	(D) OPERATOR VERIFICATION OF SET-UP ROUTINE	8 96	None				
150.6)	NOT IDENT	IFIED CONTAINER	MATERIAL CAN NOT BE USED	4	N/A	IMPROPER HANDLING OF THE MATERIAL MISS OPERATION	2	(P) OPERATOR METHOD	8 64	None				Т
160) PLACE SHIPPING LABEL ON CONTAINER/BOX	WRO	ONG LABEL	MISS ID-CUSTOMER INSATISFACTION	4	N/A	MISS OPERATION, OPERATOR DOES NOT VERIFY THE SHIPPING LABEL AGAINTS THE METHOD -SIMILAR COMPONENT	2	(P) OPERATOR METHOD -DMANUFACTURING VERIFY - Q.C FINAL AUDIT	7 56	None				Ī
160.11)	DAMA	AGED LABEL	SHIPPING LABEL CAN NOT BE USED -MANUFACTURING FLOW INTERRUPTED	4	N/A	-INCORRECT HANDLING -INCORRECT PRINTING	2	(D) MANUFACTIRING INSPECTION -D- Q.C FINAL VERIFY -VPS IN SHIPPING LABEL PRINTING AREA	7 56	None				T
160.12)	WRONG	PLACED LABEL	MANUFACTURING FLOW INTERRUPTED	3	N/A	MISS OPERATION	2	(D) Q.C FINAL INSPECTION OPERATOR METHOD	7 42	None				T
162) SCANING, PROCESS CARD, TOOL ACH,COMPONENTS. ID OPERATOR AND SHIPPING LABEL.	WRONG \	WORK METHOD	INTERRUPTED  MANUFACTURING FLOW - ASSEMBLY PROBLEM	4	N/A	MISS OPERATION	2	(P) OPERATOR METHOD -(D)SCANING WITH ELECTRONIC DETECTION	4 32	None			Ī	T
162.1)	WRONG	G TOOL NEST	INTERRUPTED MANUFACTURING FLOW - ASSEMBLY PROBLEM	4	N/A	MISS OPERATION	2	(P) OPERATOR METHOD -(D)SCANING WITH ELECTRONIC DETECTION	4 32	None			Ī	T
162.2)	WRONG	COMPONENT	INTERRUPTED MANUFACTURING FLOW - ASSEMBLY PROBLEM	4	N/A	MISS OPERATION	2	(P) OPERATOR METHOD -(D)SCANING WITH ELECTRONIC DETECTION	4 32	None			T	T

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System	Х	Subsystem		Co	mponer	t	Pag 1	ge		FMEA Number AUTO FLEX (e		509775	2)		
t Number lphi:33386295)		•	Design or Process Responsibili BRIONES, DIEGO ALBERTO	ity				epared by SAMEA, PEDRO N		Telephone # +52 844 41155	00				_
del Year(s)/Vehicle(s)			Key Date				Ori	ginal FMEA Date		FMEA Revision	n Date				_
MPONENT e Team			2019-07-02 00:00:00				201	19-06-27 00:00:00		2019-06-27 11: Supervisor's			—	—	_
19060 LOPEZ, ADRIAN G, MOLDING F 13400 VIELMA, EDUARDO A, ME ENG 12 AREVALO, VICTOR, RELIABILITY 4-	RODUCTION CO INEER - ELECTR 11-55-00 SIBA	ONTROL SUPERVISC RICAL +52 844 438906 MEA, PEDRO N, ME	OR +52 844 4115500 RAMIRE 60 GARCIA, ABRIL, ASSOC SUPERVISOR - ENGRG SUPP	EZ, F CUS OR1	ABIAN TOME! +52 84	ENERAL SUPERVISOR +52 844 4115500 BRIONES, DIEG HORACIO, OUALITY ENGINNER +52 844 4115500 HERN. R SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ, 4 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEERING ZARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	ANDE SALC	EZ, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER + DME, ASSOC CUSTOMER SATISFACTION ADMIN CHNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE	52 844	RUBIO, BER		esults			
Item/Process Function Requirements		al Failure Mode	Potential Effect(s) of Failure	S e v	C I a s s	Potential Cause(s)/ Mechanism(s) of Failure	O c c	Current Design/Process Controls	D R e P t N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	S C v	O D c e c t	R P N
162.3)	WRONG S	SHIPPING LABEL	INTERRUPTED MANUFACTURING FLOW - ASSEMBLY PROBLEM	4	N/A	MISS OPERATION	2	(P) OPERATOR METHOD -(D)SCANING WITH ELECTRONIC DETECTION	4 32	None			П	Ī	
70) PLACE RAW MATERIALS INTO THE HOPPER	DAMAGE	CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	DAMAGED CONVEYOR BELT DEFECTS FROM SUPPLIER	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD	6 84	None			П		
170.1)	DAN	MAGE TPA	ASSEMBLY PROBLEMS	8	N/A	DAMAGED CONVEYOR BELT DEFECTS FROM SUPPLIER	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD	6 96	None			$\prod$		
170.2)	INCORREC	MPONENT INTO THE CT HOPPER (RAW RIAL MIXED)	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	3 2 T	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. CCA SYSTEM	6 84	None			Ш		
170.3)	COMPONI MATERIAL (	TAMINATED ENTS ,FOREIGN (FOOD, OIL, DUST, ETC)	CONTAMINATED PRODUCT SHIPPED	6	N/A	ABSENCE OF PREVENTIVE MAINTENANCE. AIR CONTAMINANTS-OPERATOR DOESN - FOLLOW THE METHOD CORRECTLY	2	(P) (P) 1.MANUFACTURING INSPECTION 2.PREVENTIVE MAINTENANCE PLAN 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.FINISHED GOODS CONTAINERS IN ENCLOSED AREA DURING PROCESSING	8 96	None					
75) COMPONENTS TRANSPORTATION DM FEEDER SYSTEM TO FIELD OF VIEV	DAMAGE	E CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	DAMAGED CONVEYOR BELT DEFECTS FROM SUPPLIER	2	(D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD	7 98	None			П	T	
175.01)	WRONG	CONNECTOR	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	3 2 T	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. CCA SYSTEM 5. VISION SYSTEM	4 56	None			П		
175.02)	MISSING	CONNECTOR	PROCESS DISRUPTION. PROCESS WILL NOT RUN	7	N/A	OPERATOR FAILURE TO FOLLOW PROPER PROCEDURE BAD ADJUST THE PRESENCE SENSOR	2	(P) (D) 1. ANDON SYSTEM 2.PRESENCE SENSOR 3.VISION SYSTEM	4 56	None			П	T	
175.03)	DAN	MAGE TPA	ASSEMBLY PROBLEMS	7	N/A	DAMAGED CONVEYOR BELT DEFECTS FROM SUPPLIER	2	(D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD	7 98	None			П	Ī	
175.04)	WR	ONG TPA	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER		(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.CCA SYSTEM 5. VISION SYSTEM	4 56	None			П		
175.05)	MIS	SSING TPA	PROCESS DISRUPTION. PROCESS WILL NOT RUN.	7	N/A	OPERATOR FAILURE TO FOLLOW PROPER PROCEDURE BAD ADJUST THE PRESENCE SENSOR	2	(D) (D) 1. ANDON SYSTEM 2.PRESENCE SENSOR 3.VISION SYSTEM	4 56	None				Т	
30) PICK AND PLACE THE CONNECTOR THE WALKING BEAM AUTOMATICALLY IN MODULE		CONNECTOR	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING, PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	3 2 T	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. CCA SYSTEM 6. VISION SYSTEM	4 56	None			П		
180.01)	CONNEC MATERIAL (	TAMINATED TOR ,FOREIGN (FOOD, OIL, DUST, ETC)	CONTAMINATED PRODUCT SHIPPED	6	N/A	ABSENCE OF PREVENTIVE MAINTENANCE. AIR CONTAMINANTS-OPERATOR DOESN - FOLLOW THE METHOD CORRECTLY	2	(D) (P) 1.MANUFACTURING INSPECTION 2.PREVENTIVE MAINTENANCE PLAN 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.FINISHED GOODS CONTAINERS IN ENCLOSED AREA DURING PROCESSING	8 96	None					
180.02)		WRONG ORIENTED	ASSEMBLY PROBLEMS	7	N/A	END OF ARM TOOLING MISSADJUSTED ROBOT VISION SYSTEM MALADJUSTED	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. (b) END OF ARM TOOLING 4. (P) SETUP METHOD ROBOT 5. (P) PREVENTIVE MAINTENANCE PLAN. 6. VISION SYSTEM 7 TOOLING DESING	4 56	None			П		
180.03)	DAMAGE	CONNECTOR	ASSEMBLY PROBLEMS PROCESS DISRUPTION	7	N/A	CONNECTOR WRONG SEATED INTO THE WALKING BEAM-WRONG WALKING BEAM-MAINTENANCE METHOD ABSCENSE	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD	5 70	None			П		
180.04)	MORE THA	N 1 CONNECTOR	ASSEMBLY PROBLEMS PROCESS DISRUPTION	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. (D) END OF ARM TOOLING 5. MAINTENANCE METHOD 6. VISION SYTEM 7. TOOLING DESING	4 56	None					
35) AUTOMATIC TRANSPORTATION OF IE CONNECTOR TO THE NEXT MODULE	DAMAGE	E CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	WRONG WALKING BEAM WRONG SPRING INTO THE PRESSURE PAD WORNOUT WALKING BEAM WALKING BEAM STUCK- CONNECTOR WRONG SEATED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3. AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD 6. (D) BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None			П		
185.01)	CONNECTOR	WRONG ORIENTED	ASSEMBLY PROBLEMS	7	N/A	WRONG WALKING BEAM WRONG SPRING INTO THE PRESSURE PAD WORNOUT WALKING BEAM WALKING BEAM STUCK END OF ARM MALADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3. AUDIT PRODUCT OF FINAL ASSEMBLY 4. (D) END OF ARM TOOLING 5. MAINTENANCE METHOD 6.(D) BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None					

220) ASSEMBLY TPA WITH AUTOMATIC PRESS

TPA FULL STAGE

ASSEMBLY PROBLEMS

### POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE METHOD 4. SENSOR PRESS 5. TOOLING DESING

				Design FMEA				X	Process FMEA					Delph Confi		ial
art Certificat	ion															
	System	Χ	Subsystem		Con	nponent		Pag 1	je		FMEA Number AUTO FLEX (e	-FMEA DOC ID	5097752	,		
art Number elphi:3338629	5)			Design or Process Responsibili BRIONES, DIEGO ALBERTO	ty				pared by AMEA. PEDRO N		Telephone # +52 844 41155	20				
odel Year(s)/V				Key Date				Orig	ginal FMEA Date		FMEA Revision	Date				$\neg$
OMPONENT ore Team				2019-07-02 00:00:00				201	9-06-27 00:00:00		2019-06-27 11: Supervisor's			—		ᆜ
889060 LOF 663400 VIE	PEZ, ADRIAN G, MOLDING PRI MA. EDUARDO A. ME ENGIN	ODUCTION CO	NTROL SUPERVISC CAL +52 844 438906	R +52 844 4115500 RAMIRE	Z, F	ABIAN I	NERAL SUPERVISOR +52 844 4115500 BRIONES, DIEG CHORACIO, QUALITY ENGINNER +52 844 4115500 HERNA SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ, \$ 44115500 MENDOZA, ERIK, INDUSTRIAL ENGINEERING CARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	ANDE	Z, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER + ME. ASSOC CUSTOMER SATISFACTION ADMIN	52 844	RUBIO, BER		sults			
Item	O 3480 MORALES, OSCAF //Process Function Requirements		SS TECHNICIAN PL	ANT 8400 CENTEC 3 +52 84 48  Potential Effect(s) of Failure	S e	C I a	Potential Cause(s)/	+52 8 O c	Current Design/Process	D R	Recommended	Responsibility & Target	Actions Taken	S C c	De	R
					٧	s s	Mechanism(s) of Failure	С	Controls	t N	Actions	Completion Date		v c	t	N
	185.02)	MORE THAN	I 1 CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	WRONG END OF ARM TOOLING END OF ARM MALADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.4UIDT PRODUCT OF FINAL ASSEMBLY 4. MAINTENANCE METHOD 5. TOOLING DESING 6.(D) BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None					
	SYSTEM INSPECTION OF CONNECTOR	WRONG INDEX	X OF CONNECTOR	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	. 2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5. VISION SYTEM 6. CCA SYSTEM	4 56	None					
	190.01)	INCORRE CON	CT COLOR OF NECTOR	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	. 2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5. VISION SYTEM 6. CCA SYSTEM 7. MASTER PIECES 8. VISION SYSTEM	4 56	None					
	190.03)	LESS THAN	1 CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5. VISION SYTEM	4 56	None					
	190.04)	MORE THAN	1 CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5. VISION SYTEM	4 56	None			T		
	190.05)	CONNECTOR V	WRONG ORIENTED	ASSEMBLY PROBLEMS	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. (P) SETUP METHOD ROBOT 4. (P) PREVENTIVE MAINTENANCE PLAN. 5. VISION SYSTEM 6. TOOLING DESING	4 56	None					
	190.06)	DAMAGED	CONNECTOR	ASSEMBLY PROBLEMS	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. (P) SETUP METHOD ROBOT 4. (P) PREVENTIVE MAINTENANCE PLAN. 5. VISION SYSTEM 6. TOOLING DESING 7. MASTER PIECES	4 56	None					
	D PLACE THE TPA ON THE EAM AUTOMATICALLY IN MODULE	WRO	DNG TPA	NOT FUNCTIONAL PART	7	N/A	IMPROPER MATERIAL HANDLING. PROCESS OF PARTS REMOVES INCOMPLETE BEFORE THE PROCESS START MIXED MATERIAL FROM SUPPLIER	. 2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. CCA SYSTEM 6. VISION SYSTEM	4 56	None					
	200.01)	COMPONE MATERIAL (F	AMINATED :NTS,FOREIGN :OOD, OIL, DUST, ETC)	CONTAMINATED PRODUCT SHIPPED	6	N/A	ABSENCE OF PREVENTIVE MAINTENANCE. AIR CONTAMINANTS-OPERATOR DOESN -FOLLOW THE METHOD CORRECTLY	2	(D) (P) 1.MANUFACTURING INSPECTION 2.PREVENTIVE MAINTENANCE PLAN 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.FINISHED GOODS CONTAINERS IN ENCLOSED AREA DURING PROCESSING	8 96	None					
	200.02)	LESS 1	THAN 1 TPA	ASSEMBLY PROBLEMS PROCESS DISRUPTION	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5.(D) END OF ARM TOOLING 6. VISION SYTEM	4 56	None					
	200.03)	MORE <sup>-</sup>	THAN 1 TPA	ASSEMBLY PROBLEMS PROCESS DISRUPTION	7	N/A	MALADJUSTED OF END OF ARM TOOLING HOPPER KNOCKDOWN BRUSH WORN VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5.TOOLING DESING 6.(D) END OF ARM TOOLING 7. VISION SYSTEM	4 56	None					
	200.04)	TPA WRO	NG ORIENTED	ASSEMBLY PROBLEMS	7	N/A	END OF ARM TOOLING MISSADJUSTED ROBOT VISION SYSTEM MALADJUSTED	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. (P) SETUP METHOD ROBOT 4. (P) PREVENTIVE MAINTENANCE PLAN. 5. VISION SYSTEM 6. TOOLING DESING	4 56	None					
	200.05)	DAM	AGE TPA	ASSEMBLY PROBLEMS	8	N/A	MALADJUSTED OF END OF ARM TOOLING WRONG END OF ARM TOOLING - DEFECTS FROM SUPPLIER	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD	5 80	None					
	TIC TRANSPORTATION OF CTOR-TPA TO AUTOMATIC PRESS	SUBA	ONNECTOR-TPA SSEMBLY	ASSEMBLY PROBLEMS	7	N/A	WRONG WALKING BEAM WRONG SPRING INTO THE PRESSURE PAD WORNOUT WALKING BEAM WALKING BEAM STUCK	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD 6.(D) BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None					
	210.01)	SUBASSE	CTOR-TPA MBLY WRONG IENTED	ASSEMBLY PROBLEMS	7	N/A	WRONG WALKING BEAM WRONG SPRING INTO THE PRESSURE PAD WORNOUT WALKING BEAM WALKING BEAM STUCK END OF ARM MALADJUSTE	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. MAINTENANCE METHOD 5.(D) BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None					

7 N/A PUSHER MALADJUSTED PRESS MALADJUSTED WRONG PUSHER

230.03)

230.04)

230.05)

230.06)

230.07)

230.08)

235) FINISH GOOD AUTOMATIC

TRANSPORTATION FROM VISION SYSTEM

TO PACKING

· APTIV ·				F	POT	ENTIAL FAILURE MODE	Δ	AND EFFECTS ANALYSIS							
			Design FMEA				X	Process FMEA			ſ	X	Delph Confid	i denti	ial
Part Certification															
System	Χ	Subsystem		Cor	nponent		Pag 1	je		FMEA Number AUTO FLEX (e-	FMEA DOC ID	5097752)			
Part Number (Delphi:33386295)		•	Design or Process Responsibil BRIONES, DIEGO ALBERTO	ity				pared by AMEA, PEDRO N		Telephone # +52 844 411550	20				٦
Model Year(s)/Vehicle(s) COMPONENT			Key Date 2019-07-02 00:00:00				Orig	AMEA, PEDRO N ginal FMEA Date 9-06-27 00:00:00		FMEA Revision 2019-06-27 11:2	Date				
Core Team CHAVARRIA, VICTOR, ME SUPERVISOR - MI	ODUCTION CO	NTROL SUPERVISO	R +52 844 4115500 RAMIR	EZ, F	ABIAN I	HORACIO, QUALITY ENGINNER +52 844 4115500 HERNA	NDE	BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844 IZ, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +5 ME, ASSOC CUSTOMER SATISFACTION ADMIN	2 844	Supervisor's RUBIO, BER					
+52 AREVALO, VICTOR, RELIABILITY 4-11	I-55-00 SIBA	MEA, PEDRO N, ME	SUPERVISOR - ENGRG SUPE	ORT	+52 84	2ARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	TEC	CHNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE			Action Re	sults			
Item/Process Function Requirements		ıl Failure Mode	Potential Effect(s) of Failure	S e v	C I a s s	Potential Cause(s)/ Mechanism(s) of Failure	O c c	Current Design/Process Controls	D R e P t N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	ес	D e t	Р
220.01)		AGE IN PRE-STAGE DSITION	ASSEMBLY PROBLEMS	7	N/A	PUSHER MALADJUSTED PRESS MALADJUSTED WRONG PUSHER SLC OUT OF SPECIFICATIONS	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE METHOD 4. VISION SYSTEM 5. TOOLING DESING	4 56	None					
220.03)	DAN	MAGE TPA	ASSEMBLY PROBLEMS	7	N/A	PUSHER MALADJUSTED PRESS MALADJUSTED WRONG PUSHER BAD HANDLING OF MATERIALS PROBLEMS FROM SUPPLIER	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD 6.VISION SYSTEM	4 56	None None					
220.04)	TPA MIS	SS-ORIENTED	ASSEMBLY PROBLEMS	7	N/A	PUSHER MALADJUSTED PRESS MALADJUSTED WRONG PUSHER BAD HANDLING OF MATERIALS	2	(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE METHOD 4. VISION SYSTEM 5. TOOLING DESING 6. VISION SYSTEM	4 56	None None					
220.05)	INCORREC*	T COLOR OF TPA	ASSEMBLY PROBLEMS	7	N/A	VISION SYSTEM MALADJUSTED -HANDLING OF MATERIALS	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.MAINTENANCE METHOD 5. VISION SYTEM	4 56	None					
220.06)	WR	ONG TPA	ASSEMBLY PROBLEMS	7	N/A	VISION SYSTEM MALADJUSTED -HANDLING OF MATERIALS	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. CCA SYSTEM 6. VISION SYSTEM	4 56	None					П
225) FINISH GOOD AUTOMATIC TRANSPORTATION TO VISION SYSTEM  ASSEMBLY  ASSEMBLY			ASSEMBLY PROBLEMS	7	N/A	WRONG WALKING BEAM WRONG SPRING INTO THE PRESSURE PAD WORNOUT WALKING BEAM WALKING BEAM STUCK FINISH GOOD ASSEMBLY WRONG ORIENTED FINISH GOOD ASSEMBLY WRONG SEATED IN THE TOOLING	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD 6.BREAK AWAY COMB FEATURE DURING HIGH FORCE COLLISION	5 70	None					
230) FINISH GOOD ASSEMBLY INSPECTION WITH VISION SYSTEM		OOD ASSEMBLY SH BAD ASSEMBLY	NON FUNCTIONAL PART	7	N/A	VISION SYSTEM MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. TOOLING DESIGN 5. MAINTENANCE METHOD 6. MASTER	4 56	None					

230) FINISH GOOD ASSEMBLY INSPECTIO CAL WITH VISION SYSTEM 230.01) FINISH BAD ASSEMBLY CALLED NON FUNCTIONAL PART N/A FINISH GOOD ASSEMBLY 230.02) INCORRECT COLOR OF TPA NON FUNCTIONAL PART

BAD ORIENTATION OF TPA

INCORRECT CAVITIES OF TPA

TPA FULL STAGE

TPA NO ENGAGE IN PRE-STAGE

POSITION

LESS THAN 1 TPA

DAMAGED TPA

DAMAGE FINISH GOOD

ASSEMBLY

NON FUNCTIONAL PART N/A VISION SYSTEM MISSADJUSTED (P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3 AUDIT PRODUCT OF FINAL ASSEMBLY TOOLING DESIGN 5 MAINTENANCE METHOD 6 (P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE ASSEMBLY PROBLEMS PUSHER MALADJUSTED PRESS MALADJUSTED WRONG **PUSHER** 

PUSHER MALADJUSTED PRESS MALADJUSTED WRONG

PUSHER

PUSHER MALADJUSTED PRESS MALADJUSTED WRONG

PUSHER

PUSHER MALADJUSTED PRESS MALADJUSTED WRONG

**PUSHER** 

WRONG WALKING BEAM WRONG SPRING INTO THE

PRESSURE PAD WORNOUT WALKING BEAM WALKING

BEAM STUCK

VISION SYSTEM MISSADJUSTED

VISION SYSTEM MISSADJUSTED

VISION SYSTEM MISSADJUSTED

N/A

N/A

N/A

NON FUNCTIONAL PART

ASSEMBLY PROBLEMS

ASSEMBLY PROBLEMS

ASSEMBLY PROBLEMS

ASSEMBLY PROBLEMS

METHOD 4 TOOL NEST 5 TOOLING DESING 6 AUTOVERIFICATION 7. SENSOR PRESS 8. MASTER (P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE METHOD 4. VISION SYSTEM 5. TOOLING DESING 6. MASTER PIECES

PIECES 7. AUTOVERIFICATION

(P) (D)1. OPERATOR METHOD 2. MANUFACTURING

TOOLING DESIGN 5. MAINTENANCE METHOD 6. MASTER PIECES 7. AUTOVERIFICATION

(P) (D)1. OPERATOR METHOD 2. MANUFACTURING

INSPECTION 3 AUDIT PRODUCT OF FINAL ASSEMBLY. TOOLING DESIGN 5. MAINTENANCE METHOD 6. AUTOVERIFICATION

(P) (D)1. OPERATOR METHOD 2. MANUFACTURING

INSPECTION 3 AUDIT PRODUCT OF FINAL ASSEMBLY TOOLING DESIGN 5. MAINTENANCE METHOD 6. MASTER PIECES 7. AUTOVERIFICATION

AUTOVERIFICATION

INSPECTION 3 AUDIT PRODUCT OF FINAL ASSEMBLY

None

None

None

None

None

None

None

None

None

(P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT PRODUCT OF FINAL ASSEMBLY 3. MAINTENANCE METHOD 4. VISION SYSTEM 5. TOOLING DESING 6. (P) (P) 1.MANUFACTURING INSPECTION 2. AUDIT

AWAY COMB FEATURE DURING HIGH FORCE COLLISIO

PRODUCT OF FINAL ASSEMBLY 3 MAINTENANCE

METHOD 4. VISION SYSTEM 5. TOOLING DESING 6. (P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3 AUDIT PRODUCT OF FINAL ASSEMBLY TOOLING DESIGN 5. MAINTENANCE METHOD 6.BREAK

# POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Design FMEA	Process FMEA	X Delphi Confidential

Part Certification

389060	FION CONTROL SUPERVISC ELECTRICAL +52 844 43890 SIBAMEA, PEDRO N, ME	DR +52 844 4115500 RAMIRE 60 GARCIA, ABRIL, ASSOC SUPERVISOR - ENGRG SUPP	RATI EZ, F CUS	FABIAN STOME T +52 8	IHORACIO, QUALITY ENGINNER +52 844 4115500 DMINGU R SATISFACTION ADMIN +52 844 4115500 DOMINGU 44 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEER ZARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTE Potential Cause(s)/ Mechanism(s) of Failure	IEGO AL RNANDI EZ, SALCE ING TEC C II +52 O C C	CHNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE	D F F F T 1 7 9	Telephone # +52 844 41155 FMEA Revision 2019-06-27 11 Supervisor's RUBIO, BEF	n Date :20:01 Approval	Actions Taken	S O C C	D e t
Del Year(s)/Vehicle(s)	ION CONTROL SUPERVISC LECTRICAL +52 844 43890 SIBAMEA, PEDRO N, ME PROCESS TECHNICIAN PL  Potential Failure Mode  ROKEN CONNECTOR  SH GOOD PART WITH TPA ON FULL STAGE  COMPLETE STD PACK  D PART SEND TO FINISH GOOD CONTAINER  ASSEMBLY OUT OF SPECIFICATION	2019-07-02 00:00:00  ARZA, RAQUELINE V, SR OPER DR +52 844 4115500 RAMIRE O GARCIA, ABRIL, ASSOC SUPERVISOR - ENGRG SUPP ANT 8400 CENTEC 3 +52 84 46  Potential Effect(s) of Failure  CUSTOMER PROBLEMS. NOT FUNCTIONAL PART  CUSTOMER INSATISFACTION  CUSTOMER PROBLEMS CUSTOMER PROBLEMS CUSTOMER PROBLEMS CUSTOMER PROBLEMS CUSTOMER PROBLEMS CUSTOMER PROBLEMS	EZ, F CUS PORT	FABIAN STOME T +52 8 8400 C I a s s N/A	HORACIO, QUALITY ENGINNER +52 844 4115500 DOMINGU 8 SATISFACTION ADMIN +52 844 4115500 DOMINGU 44 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEER ZARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTE  Potential Cause(s)/ Mechanism(s) of Failure  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES	20' IEGO AL RNANDI EZ, SALC RING TE C II +52  O C C	ig-06-27 00:00:00  BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844  EZ, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +  OME, ASSOC CUSTOMER SATISFACTION ADMIN CHNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE  844 4389060  Current Design/Process Controls  (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.  EQUIPMENT DESIGN 5. MAINTENANCE METHOD (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.	D F e F t 1 7 9	2019-06-27 11 Supervisor's RUBIO, BEF	Approval RNARDO U  Action Re  Responsibility & Target Completion	Actions	3 O c c	D e t
### Team ### AVARRIA, VICTOR, ME SUPERVISOR - MECHANIC #### AVARRIA, VICTOR, ME SUPERVISOR - MECHANIC #### AVARRIA, VICTOR, ME SUPERVISOR - MECHANIC #### AVARRIA, VICTOR, RELIABILITY 4-11-5-50 #### ANTENIMIENTO 3480 MORALES, OSCAR IVAN, F  #### Item/Process Function	ION CONTROL SUPERVISC LECTRICAL +52 844 43890 SIBAMEA, PEDRO N, ME PROCESS TECHNICIAN PL  Potential Failure Mode  ROKEN CONNECTOR  SH GOOD PART WITH TPA ON FULL STAGE  COMPLETE STD PACK  D PART SEND TO FINISH GOOD CONTAINER  ASSEMBLY OUT OF SPECIFICATION	ARZA, RAQUELINE V, SR OPEF JR +52 844 4115500 RAMIRE 60 GARCIA, ABSOLO SUPERVISOR - ENGRG SUPP ANT 8400 CENTEC 3 +52 84 48  Potential Effect(s) of Failure  CUSTOMER PROBLEMS. NOT FUNCTIONAL PART  CUSTOMER INSATISFACTION  CUSTOMER PROBLEMS CUSTOMER INSATISFACTION	EZ, F CUS PORT	FABIAN STOME T +52 8 8400 C I a s s N/A	HORACIO, QUALITY ENGINNER +52 844 4115500 DOMINGU 8 SATISFACTION ADMIN +52 844 4115500 DOMINGU 44 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEER ZARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTE  Potential Cause(s)/ Mechanism(s) of Failure  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES	IEGO AL RNANDI EZ, SALCE ING TEC C II +52 O C C	BERTO, SENIOR ME ENGINEER - MECHANICAL +52 844 EZ, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER + OME, ASSOC CUSTOMER SATISFACTION ADMIN CHNICIAN JUIL ORTIZ URIBE, DIEGO A., TECNICO DE 844 4389060  Current Design/Process Controls  (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3. AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3. AUDIT PRODUCT OF FINAL ASSEMBLY 4. FOR THE PROPORT OF FINAL ASSEMBLY 4. FOR THE PROPORT OF INAL ASSEMBLY 9. FOR THE	D F e F t N 7 9	Supervisor's RUBIO, BEF Recommended Actions  None	Approval RNARDO U  Action Re  Responsibility & Target Completion	Actions	S O e c	D e t
Item/Process Function   Requirements   P.	Potential Failure Mode  BROKEN CONNECTOR  BH GOOD PART WITH TPA ON FULL STAGE  COMPLETE STD PACK  D PART SEND TO FINISH GOOD CONTAINER  ASSEMBLY OUT OF SPECIFICATION	Potential Effect(s) of Failure  CUSTOMER PROBLEMS. NOT FUNCTIONAL PART  NON FUNCTIONAL PART  CUSTOMER INSATISFACTION  CUSTOMER PROBLEMS	S e v 7 7 2 2 7	C   a s s S	Potential Cause(s)/ Mechanism(s) of Failure  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES	O c c	Current Design/Process Controls  (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.	7 9	Actions  None	& Target Completion	Actions Taken	S O e c v c	D e t
240.01) FINISH  240.02) INC  240.02) INC  245) SCRAP DISPOSAL BAD  (0  290) FIRST SAMPLE RELEASED BY Q.C. PROCESS AUDIT BY Q.C.  290.02) I  290.03)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED  310.11) INC  310.111) WRO	SH GOOD PART WITH TPA ON FULL STAGE COMPLETE STD PACK D PART SEND TO FINISH GOOD CONTAINER ASSEMBLY OUT OF SPECIFICATION	NOT FUNCTIONAL PART  NON FUNCTIONAL PART  CUSTOMER INSATISFACTION  CUSTOMER PROBLEMS	7 2 7	N/A	PIECES  FALLING PIECES INTO THE PACKAGE BOX CROWD PIECES		INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD  (D) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.	7 9				Ŧ	Ī
240.02) INC  245) SCRAP DISPOSAL BAD (0  290) FIRST SAMPLE RELEASED BY Q.C. PROCESS AUDIT BY Q.C. 290.02) I  290.03)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED 310.11) INC 310.111) WRO	ON FULL STAGE  COMPLETE STD PACK  D PART SEND TO FINISH GOOD CONTAINER  ASSEMBLY OUT OF SPECIFICATION	CUSTOMER INSATISFACTION CUSTOMER PROBLEMS	7		PIECES	NG 2	INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4.	7 9	None			Ī	
245) SCRAP DISPOSAL  BAD (C 290) FIRST SAMPLE RELEASED BY Q.C. PROCESS AUDIT BY Q.C.  290.02)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED 310.11)  INC 310.111)  WRO	D PART SEND TO FINISH GOOD CONTAINER ASSEMBLY OUT OF SPECIFICATION	INSATISFACTION  CUSTOMER PROBLEMS	7	N/A	REBOUNCE OF PARTS INTO THE FG AREA	2		العد					Π
290) FIRST SAMPLE RELEASED BY Q.C. PROCESS AUDIT BY Q.C. 290.02)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED 310.11)  WRO 310.111)  WRO	ASSEMBLY OUT OF SPECIFICATION		7				(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD 6. END OF CHUTE SENSOR	4 1	6 None				
PROCESS AUDIT BY Q.C.  290.02)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED  310.11)  INC  310.111)  WRO	SPECIFICATION	ASSEMBLY PROBLEM		N/A	FLAPPER MISSADJUSTED	2	(P) (D)1. OPERATOR METHOD 2. MANUFACTURING INSPECTION 3.AUDIT PRODUCT OF FINAL ASSEMBLY 4. EQUIPMENT DESIGN 5. MAINTENANCE METHOD 6. END OF CHUTE SENSOR	4 5	6 None				
290.03)  10) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED  310.11)  310.111)  WRO	INCORRECT AUDIT		7	N/A	MISS OPERATION - MATERIAL OUT SPECIFICATION	N 2	(D) FIRST SAMPLE RELEASED WORK INSTRUCTION - INSPECTION ACCORDING TO THE DRAWING	7 9	None			T	Ī
0) FINISH ASSEMBLY IS PACKAGED BAG IS CLOSED 310.1) INC 310.111) WRO		MANUFACTURING FLOW INTERRUMPED	7	N/A	INCORRECT INFORMATION USE	2	(P) WORK INSTRUCTION OPERATOR TRAINING	7 9	None None			Т	П
IS CLOSED  310.11) INC  310.111) WRO  310.13) WRON	MISSING AUDIT	INTERRUPTED MANUFACTURING FLOW	6	N/A	INCORRECT INFORMATION USE	2	(P) WORK INSTRUCTION OPERATOR TRAINING	7 8	None			Т	П
310.111) WRO	DAMAGE MATERIAL	ASSEMBLY PROBLEM	7	N/A	INCORRECT MATERIAL HANDLING IMPROPER PACK	ING 2	(D) MANUFACTURING INSPECTION - Q.C. FINAL AUDIT	7 9	None None			Т	Г
310.13) WRON	COMPLETE STD PACK	CUSTOMER INSATISFACTION	2	N/A	MISS OPERATION	2	(P) PACKING INFORMATION ELECTRICAL ACCOUNT IN WORK STATION	7 2	8 None			Т	Г
	RONG SHIPPING LABEL	INTERRUPTED MANUFACTURING FLOW	2	N/A	MISS OPERATION	2	(D) SCANING WITH ELECTRONIC DETECTION (P) - OPERATOR METHOD	5 2	None None			I	L
	WRONG PACKING	ASSEMBLY PROBLEM CUSTOMER	4	N/A N/A	-INCORRECT HANDLING IMPROPER PACKING MISS OPERATION	2	(D) -MANUFACTURING INSPECTION -Q.C FINAL AUDIT (D) -MANUFACTURING INSPECTION -Q.C FINAL AUDIT	7 5 7 5	6 None None			十	۲
310.16) WRO	RONG SHIPPING LABEL	INSATISFACTION INTERRUPTED	2	N/A	MISS OPERATION	2		5 2	0 None			十	╆
FROM WORK STATION TO INCOMPLETE INCOME	IED GOOD IS NOT SENT TO MPLETE CONTAINER AREA	MANUFACTURING FLOW CUSTOMER INSATISFACTION	1	N/A	MISS OPERATION	2	OPERATOR METHOD  (P) WORK METHOD	8 1	6 None			$\dagger$	H
CONTAINER AREA (WHEN APPLY)  318) RELABELING WHEN APPLY  WRO	RONG SHIPPING LABEL	CUSTOMERS INSATISFACTION	4	N/A	IMPROPER MATERIAL HANDLING -SYSTEM PROBL	EM 4	(P) OPERATOR TRAINING (D) VISUAL INSPECTION	7 1	12 None			十	H
	MAGE SHIPPING LABEL	ASSEMBLY PROBLEMS	4	N/A	•		(P) OPERATOR TRAINING (P) VISUAL INSPECTION	7 5				Ŧ	尸
320) FINISHED GOOD CONTAINERS ARE DA	CTIVE SHIPPING LABEL  DAMAGED MATERIAL	SHIPPING LABEL CAN NOT BE READ ASSEMBLY PROBLEMS	2	N/A N/A	IMPROPER MATERIAL HANDLING -SYSTEM PROBLEM -IMPROPER MATERIAL HANDLING -THERE IS NO		(P) OPERATOR TRAINING (P) VISUAL INSPECTION  (D) -MANUFACTURING INSPECTION -Q.C FINAL AUDIT	7 2	None None			╁	H
OVED TO MANUFACTURING INSPECTION AREA WHEN APPLY					METHOD			Щ				丄	Ļ
320.1) 320.11) MISS	DAMAGE LABEL SSING SHIPPING LABEL	ASSEMBLY CAN NOT BE	2	N/A N/A	INCORRECT HANDLING LOOSING DURING	2	( )	8 3 7 2	None None		$\vdash$	十	+
	DAMAGE CONTAINER	BUILD SUSPECT MATERIAL	2	N/A	TRANSPORTATION DAMAGE DURING TRANSPORTATION	2	(P) OPERATOR METHOD	6 2	4 None	1	$\vdash \vdash$	+	╀
325) VERIFICATION OF SET-UP IN INCO	ORRECT VERIFICATION	SUSPECT MATERIAL	2	N/A	MISS OPERATION	2	(D) VERIFICATION OF ROUTINE OF SET UP IN	8 3	None None	1		十	T
MANUFACTURING INSPECTION AREA 330) MANUFACTURING INSPECTION FIR ONTAINMENT IS APPLIED WHEN APPLY)	RST SAMPLE MISSING	MATERIAL CAN NOT BE INSPECTED BY Q.C	1	N/A	-MISS OPERATION -FELT DOWN DURING TRANSPORTATION	2	MANUFACTURING INSPECTION AREA (P) -OPERATOR METHOD (D) -VISUAL INSPECTION	7 1	4 None		$\Box$	十	t
330.1) A	ASSEMBLY OUT OF CIFICATION ACCORDING ATTRIBUTES	ASSEMBLY PROBLEMS	7	N/A	-INCORRECT MATERIAL HANDLING -INCORRECT USI VERIFIERS WHEN APPLY	E OF 2	(P) -OPERATOR METHOD (D) -VISUAL INSPECTION	7 9	None			T	T
330.11) W	WRONG CONTAINER	SUSPECT MATERIAL	5	N/A	IMPROPER INFORMATION HAND	2	(D) -OPERATOR METHOD (D) -VISUAL INSPECTION	6 6	0 None			士	上
330.13) DAM	MAGE SHIPPING LABEL	LABEL CAN NOT BE USED	2	N/A	INCORRECT HANDLING	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	7 2	None None			I	Γ
330.14) MISS	SSING SHIPPING LABEL	ASSEMBLY CAN NOT BE BUILD	2	N/A	INCORRECT HANDLING LOOSING DURING TRANSPORTATION	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	8 3	None None				

### POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

			Design FMEA				X	Process FMEA					X	Delp Conf	ohi fiden	ntia
Part Certification																
System	Х	Subsystem		Con	mponent		Pag 1	ge			FMEA Number AUTO FLEX (e-	FMEA DOC ID	5097752	!)		
Part Number (Delphi:33386295)		•	Design or Process Responsibili BRIONES, DIEGO ALBERTO	ty				pared by AMEA, PEDRO N			Telephone # +52 844 411550	00				
Model Year(s)/Vehicle(s) COMPONENT			Key Date 2019-07-02 00:00:00				Orig 201	ginal FMEA Date 9-06-27 00:00:00			FMEA Revision 2019-06-27 11:2					
4389060 LOPEZ, ADRIAN G, MOLDING P	RODUCTION CO	ONTROL SUPERVISO	OR +52 844 4115500 RAMIRE	Z, F	ABIAN I	NERAL SUPERVISOR +52 844 4115500 BRIONES, DIEGG HORACIO, QUALITY ENGINNER +52 844 4115500 HERNA SATISFACTION ADMIN +52 844 4115500 DOMINGUEZ, \$	NDE	Z, LETICIA 2, SR CUSTOMER SATISFACTION ENGINEER +	52 {	- 1	Supervisor's . RUBIO, BER					_
+52 AREVALO, VICTOR, RELIABILITY 4-1	1-55-00 SIBA	MEA, PEDRO N, ME	SUPERVISOR - ENGRG SUPP	ORT	+52 844	4 4115500 MENDOZA, ERIK, INDUSTRIAL ENGINEERING ARTUCHE, JOSE LUIS, MATERIALS ENGINEER CENTEC II	TEC	CHNICIAN null ORTIZ URIBE, DIEGO A., TECNICO DE				Action Re	sults			
Item/Process Function Requirements	Potentia	al Failure Mode	Potential Effect(s) of Failure	S e >	C I a s s	Potential Cause(s)/ Mechanism(s) of Failure	0 0 0	Current Design/Process Controls	D e t	R P N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	e d	O D c e t	F
340) MOVE FINISH GOOD CONTAINER TO Q.C. INSPECTION AREA WHEN APPLY	DAMAG	ED MATERIAL	ASSEMBLY PROBLEMS	8	N/A	- IMPROPER MATERIAL HANDLING	2	(D) Q.C. FINAL AUDIT	8 1	128	None				Ī	Ī
340.1)	DAMAG	E CONTAINER	SUSPECT MATERIAL	2	N/A	DAMAGE DURING TRANSPORTATION	2	(P) OPERATOR METHOD	8	32	None			tt	十	T
340.11)	DAMAGE	SHIPPING LABEL	LABEL CAN NOT BE USED	1	N/A	INCORRECT HANDLING	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	8	_	None				T	T
340.12)	MISSING	SHIPPING LABEL	ASSEMBLY CAN NOT BE BUILD	1	N/A	INCORRECT HANDLING LOOSING DURING TRANSPORTATION	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	8	16	None				T	T
351) AUDIT PRODUCTS OF FINAL ASSEMBLY		IDENTIFICATED SSEMBLY	ASSEMBLY PROBLEMS	7	N/A	IMPROPER MATERIAL HANDLING -ASSEMBLY IS NOT INSPECTED ACCORDING THE DRAWING	2	(P) LABELING AND PACKAGING WORK INSTRUCCTION FOR Q.C (D) -VISUAL AID OF THE COMPONENT	6	84	None					Τ
351.1)	MISSING	SHIPPING LABEL	ASSEMBLY CAN NOT BE BUILD	4	NA	INCORRECT HANDLING LOOSING DURING TRANSPORTATION	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION OF SERVICE OPERATOR	6	48	None					Ī
351.11)	SPECIFICA <sup>®</sup>	BLY OUT OFF TION ACCORDING FRIBUTES	ASSEMBLY PROBLEMS	5	NA	INCORRECT MATERIALHANDLING -INCORRECT USE OF VERIFIERS WHEN APPLY	2	(P) OPERATOR METHOD -D- VISUAL INSPECTION	7	70	None					Ī
351.3)	WRONG S	SHIPPING LABEL	-ASSEMBLY PROBLEM	6	N/A	MISS OPERATION	2	(P) -OPERATOR METHOD	7	84	None				Т	T
351.4)	DAMAG	E CONTAINER	SUSPECT MATERIAL	2	N/A	DAMAGE DURING TRANSPORTATION	2	(D) OPERATOR METHOD	7	28	None				I	Τ
351.5)	WRONG	G CONTAINER	SUSPECT MATERIAL	5	N/A	IMPROPER INFORMATION HAND	2	(P) -OPERATOR METHOD (D) -VISUAL INSPECTION	7	70	None				I	I
352) INSPECTION LAY OUT ANNUAL		I IN TENSION OUT ION (WHEN APPLY)	CUSTOMER INSATISFACTION - NOT CAN USED	6	N/A	MISS OPERATION	2	(D) INSPECTO BY Q.C. SYSTEM PPAP	8	96	None					
370) CONTAINER IS CLOSED		ECTLY CLOSE NTAINERS	-DAMAGED COMPONENT - FOREING MATERIAL CAN GET INTO CONTAINER	6	N/A	-MISS OPERATION -DAMAGE BOX	2	(P) WORK METHOD TO CLOSE CONTAINERS	8	96	None					Ī
380) MOVE FINISH GOOD CONTAINERS TO SHIPPING AREA.	DAMAG	ED MATERIAL	-DAMAGED COMPONENT - FOREING MATERIAL CAN GET INTO CONTAINER	6	N/A	-MISS OPERATION	2	(P) WORK METHOD TO CLOSE CONTAINERS	8	96	None				Ī	Ī
390) FINISH GOOD CONTAINERS ARE SEGREGATED BY DESTINATION		TION WRONG OR MISSING	CANT NOT ELABORATE MANIFIESTO	1	N/A	-MISS OPERATION	2	(P) OPERATOR METHOD	7	14	None				T	T
400) MANIFEST (PUSH DELIVERY) IS ELABORATED	MISSING	PUSH DELIVERY	CUSTOMER INSATISFACTION	1	N/A	-MISS OPERATION	2	(P) WORK METHOD	7	14	None				I	I
410) MOVE FINISH GOOD CONTAINERS FROM SHIPPING AREA TO DISTRIBUTION CENTER	DAMAG	ED MATERIAL	CUSTOMER INSATISFACTION	4	N/A	-MISS OPERATION	2	(P) WORK METHOD	8	64	None					