



New Product Development Module

G.A.P OSM's NPD (New Product Development) module ensures a smooth Design & Development Activity which is based on APQP and simultaneously prepares all the required PPAP documentation.

It creates and saves all the documents required for Verification, Validation, Process and Product Monitoring. It also results in a smooth transition from Development to Production.

It keeps a tab on the Product Cost and the Time frame.


The various Activities covered under NPD module are shown below:-

- Project Initiation
- Projects Listing
- Working on Individual Product
- Function Identification & Study / Quality Function Deployment (QFD)
- Quality Function Deployment (QFD)
- Design Validation Plan (DVP)
- Performance Testing Sheet
- Product Costing Sheet
- Part List with details
- Development Status Review
- Defining the Process Stations with Required Inputs
- Process Flow Chart
- Process FMEA Work Sheet & Print Out
- Special Characteristics Matrix
- Inspection Sheet for Layout
- PDI Sheet (Pre Despatch Inspection)
- Checking Aids List
- Skills Required and Available Plan
- Skills Development Plan
- Child Part Detailing
- Child Part Raw material details
- Child Part Processing Details
- Child Part Finishing details
- Child Part Control Plans
- Part Submission Warrant
- PPAP Documents


Project Initiation

Edit Project Information			
Product No.	2352	Customer Part No. :	26751542
Date:	06-05-2019	Customer:	INDRAD AUTO COMPONENTS-KANCHEEPUR ▾
Product Description:	RADIATOR RESISTOR 0.43 OHMS		
Product Purpose:	RADIATOR RESISTOR		
Annual Qty:	120000	Project Life Expected:	5
Sale Price:	90	Target Cost:	50
Target date of Completion:	06-10-2019		
Project Designated to:	E2459(Sijo Joseph)E2406(Ankush Dhiman)E2337(Vikrant Verma) + -		
Annual Revenue:	1,08,00,000	Lifetime Revenue:	5,40,00,000
Update and Exit Cancel			

Projects Listing




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Self Diagnostics : TBC = 0.00



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NPD | User Functions | Work on Projects

List of Projects

☒ Projects Underway
 ☐ Sample Submitted
 ☐ Signed Off Projects
 ☒ All Projects

☐ Not Started
 ☐ Work in Progress
 ☐ Gate Approved

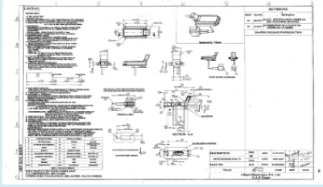


--- Select Customer ---

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Sr.No	PIF	PIF Date	Target Date	Customer	Product Number	Description	Skill Matrix	Status (Gates)								
								Gate 1	Gate 2	Gate 3	Gate 4	Gate 5	Gate 6	Gate 7	Gate 8	
1	505	18-04-2020	30-06-2020	AMAR RADIO CORPORATION. (C0019)	000	Heat Dissipating Fan	NA	●	●	●	●	●	●	●	●	●
2	493	03-09-2019	10-09-2019	EUROCEIL SYSTEMS PVT LTD. (C10127)	1264-02C	TERMINAL BLOCK 2 WAY 30 AMPS	●	●	●	●	●	●	●	●	●	●
3	491	17-05-2019	30-06-2019	DAIKIN AIRCONDITIONING INDIA PVT. LTD (C10109)	1205-01	TERMINAL SEAT 4 WAY (SMALL)	●	●	●	●	●	●	●	●	●	●
4	492	18-05-2019	30-06-2019	DAIKIN AIRCONDITIONING INDIA PVT. LTD (C10109)	1205-02	TERMINAL SEAT - 3 WAY	●	●	●	●	●	●	●	●	●	●
5	490	17-05-2019	30-06-2019	DAIKIN AIRCONDITIONING INDIA PVT. LTD (C10109)	1266	TERMINAL SEAT 4 - WAY (BIG)	●	●	●	●	●	●	●	●	●	●
6	462	28-10-2017	25-11-2017	SAINT GOBAIN INDIA PRIVATE LIMITED (C7718)	1385-H	TERMINAL	●	●	●	●	●	●	●	●	●	●
7	461	29-09-2017	13-10-2017	AUTO WINDOW (C10082)	1385-V	TERMINAL KNOZI TYPE	●	●	●	●	●	●	●	●	●	●
8	447	02-02-2017	20-02-2017	BHARAT ELECTRONICS LTD. (C0474)	1387-02	Contact (PD)	●	●	●	●	●	●	●	●	●	●
9	474	31-07-2018	24-08-2018	INTERNATIONAL TRACTORS LTD. (C3267)	1566	FLASHER	●	●	●	●	●	●	●	●	●	●

GAP it
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Working on Individual Product

Product Code	750-02	Description	Door Switch		Project I/C	+ -	
Customer Code	C7453	Customer Name	SML ISUZU LIMITED		Customer Part No.		
Purpose	It is used to activate Driver cabin light while opening door of the vehicle.						
Target Date	15-04-2017	Sale Cost	Rs.67.00	Target Cost:	Rs.46.90	Tentative Cost till now	Rs. 20.32
Annual Qty.	15000 Nos	Project Life Expected	5	Annual Revenue	Rs.Lacs 10.05	Lifetime Revenue	Rs.Lacs 50.25
Actual Date of Sample Submission	20171012	Target Date of Sign Off			Actual Date of Sign Off	20180522	
Drawing		3D pdf File			Picture		
 <p>Medium Large Extra Large</p>		 <p>Full View</p>			 <p>Medium Large Extra Large</p>		
Choose File No file chosen Upload drawing		Choose File No file chosen Upload 3D pdf			Choose File No file chosen Upload Picture CAMERA		
Part List		Costed BOM		Functions		DFMEA	
Assy Process & Skill Development		PFC		PFMEA		Control Plans	
PPAP		Inspection Sheet		PDI		Layout Inspection Sheet	

Function Identification & Study / Quality Function Deployment (QFD)

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Self Diagnostics : TBC = 0.00

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Product Functions of 1266(TERMINAL SEAT 4 - WAY (BIG))

Sr.No	Main Function	Specific Needs				
1.	Primary	1.	Should withstand at 2500V for 1 minute			QFD
			Depends on	Raw Material	Process	Dimension
			1266-27-03-TERMINAL PLATE	-		
		2.	To transfer the electric supply of 300V AC 25 Amps from screw terminal to Push on Terminal Side(Should be able to withstand at 300V AC 25 Amps)			QFD
			Depends on	Raw Material	Process	Dimension
	1266-27-03-TERMINAL PLATE	Brass-		0.8 mm X 6.4 mm		
	1265-06-04-SCREW M4x10	-	Tightening torque (min 15kgf.cm)			
Enter new function based specific need						
		1.	Connector Insertion in to the terminal Plate			QFD
			Depends on	Raw Material	Process	Dimension
			1266-27-03-TERMINAL PLATE	-		6.4 -0.1mm
			1266-27-03-TERMINAL PLATE	-		6.4 -0.1mm
		2.	Insulation resistance should be more than 500 V DC/ 100M ohms			QFD


Quality Function Deployment (QFD)

<div></div> <div>explore more.....</div> <div>Gilard Electronics Pvt Ltd</div>	<div>Quality Function Deployment</div> <div>of 750-02-Door Switch</div>										Date : 28th of August 2019				
											Time : 12:49:57 PM				
											User : Gagandeep Kaur				
Function	Part List														
	0750-73-16-PVC WIRE BLACK (ABS Wire)	0009-44-01-SILICON GREASE (Silicon)	0016-02-01-Solder Wire (1.0mm dia) lead free (MTC OF RoHS)	0016-01-01-HYBRID-6633 SOLDER CONDITIONER (MTC OF RoHS)	0750-27-12-STOPPER TERMINAL (Vicker Hardness 110 VPM Max.)	0750-02-15-SPRING (Stainless Steel Wire)	0009-44-22-ARALDITE (HARDENER & RESIN) (MTC OF RoHS)	0750-27-14-FLOATING TERMINAL (Vicker Hardness 110 VPM Max.)	0750-27-18-COUPLER TERMINAL (MTC OF RoHS)	0750-03-19-BODY (ABS BLACK)	0750-03-11-SLIDER (ABS BLACK)	0750-03-12-COUPLER (Nylon 66)	0750-00-19-GLUED FOAM (MTC OF RoHS)	0750-00-13-STOPPER RUBBER (MTC OF RoHS)	.
Volt Drop : 0.1 V Max (Before test), 0.25 V Max (After test)	D														
Product should comply to ROHS requirement.	R	R		R		R		R		R		R		R	
Insulation resistance : 1 M ohm (Measured by 500V Megger)	D														
Operation Force : 2.94 +0/-1.4 N (300+0/-150 gf) Initial 4.9 +1.95/-0 N (500+200/-0 gf) Stroke 8 mm						D									
DURABILITY: Insulation Resistance 1M ohm (measured by 500V megger),voltage drop 0.1 V Max(Before test) 0.25V Max (After test) and operation force 2.94 +0/-1.4 N (300+0/-150 gf) Initial and 4.9 +1.95/-0 N (500+200/-0 gf) Stroke 8 mm shall be met after 40,000 cycle operation at 12V, 2A under the following conditions: Stroke: 8 mm, Operation cycle Rate:15/Min.	D				RP	D		RP							
Vibration Resistance :As per JIS D 1601 (Type 1, Class B)															
Working Temp. range : Shall operate normally,be free from															


Design Validation Plan (DVP)



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Design Validation Plan of 1266(TERMINAL SEAT 4 - WAY (BIG)) GE/F-04/65

--Select Item to Copy --

General Specifications

Enter the test name Add New Test Name




Test	Method	Specification		Checked By	Instrument	Time for testing	No. of Samples	Select to del.
		Initial	Final					
Rating 300 V AC 25 Amps	Connect the terminal block with a			Self	--Select instrument	1 Day		<input type="checkbox"/>
Drop Test(Falling Test)	Drop the specimen from height of			Self	--Select instrument	1 Day		<input type="checkbox"/>
Tightening Strength	Tightening torque 1.4 N-m (14.3 kgf)		14.3 kgf	Self	--Select instrument	1 Day		<input type="checkbox"/>
Tightening Strength 2	Tightening torque 1.47N.m		10.2kg	Self	--Select instrument	1 Day		<input type="checkbox"/>
Wire Holding Force	Connect the wire with torque 1.2N-m		14.3kgf	Self	--Select instrument	1 Day		<input type="checkbox"/>

Performance

Enter the test name Add New Test Name

Test	Method	Specification		Checked By	Instrument	Time for testing	No. of Samples	Select to del.
		Initial	Final					
Insulation Resistance	Check the insulation resistance with	50 m Ohm		Self	--Select instrument	1 Day		<input type="checkbox"/>

Part List with details

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NPD | User Function | Work on projects

Part List




GE/F-04/21 Indent Review Sheet

Item Description: TERMINAL SEAT 4 - WAY (BIG)		Item No.: 1266	Drawing available: Y	Design Plan No.:	Prepared by: -99@99
Customer: DAKIN AIRCONDITIONING INDIA PVT. LTD		Action Required:	Sub Assy:	Prod. per MAN day: 250	Assy. Cost: 4.08

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S.No.	Part No.	Description	Qty/Pc.	Sub Assy (Y/N)?	Mfg. Process & Raw Material	Material Grade, if any	Item Source	Raw Material Code	Cost	Drawing/SPCN no.	Drawing Available	Click to Del.
1	1265-06-04 Design Review	SCREW M4x10	7	N			Purchase		0.59	12650604.jpg	Y	
2	1266-27-03 Design Review	TERMINAL PLATE	4	N	PROGRESSIVE TOOL , TAPPING1 , TAPPING 2		Inhouse	0027-08-24	2.61	12662703.jpg	Y	
	0027-08-24	BRASS ROLL 0.8 X 90 MM HB (Rs. 416)	7.87				Purchase					
3	1266-54-01 Design Review	HOUSING	1	N	INJECTION MOULDING		Inhouse	0054-00-31	4.61	12665401.jpg	Y	
	0054-00-31	PBT 30% GF BLACK(FR V-0) (Rs. 204.1)	19				Purchase					
4	1266-54-02 Design Review	HOUSING COVER	1	N	INJECTION MOULDING		Inhouse	0054-00-31	1.81	12665402.jpg	Y	
	0054-00-31	PBT 30% GF BLACK(FR V-0) (Rs. 204.1)	5				Purchase					

Development Status Review

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Status of 1266 (TERMINAL SEAT 4 - WAY (BIG))

R-Required, S-Submitted, A-Approved





















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Part No.	Drawing			Make/Buy	Source/RM source			Process	DRC			Tool No.	Tool Design			Tooling			Trial			Verification		
	R	S	A		R	S	A		R	S	A		R	S	A	R	S	A	R	S	A	R	S	A
Start Date																								
EDC																								
1265-06-04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Buy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Not required	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not Required	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1266-27-03	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Make	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Blanking, bending, Tapping In progressive tool & Plating	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1266-03-A1, 1266-03-A2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1266-54-01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Make	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Injection Molding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1266-01-A1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1266-54-02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Make	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Injection Molding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1265-02-A1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

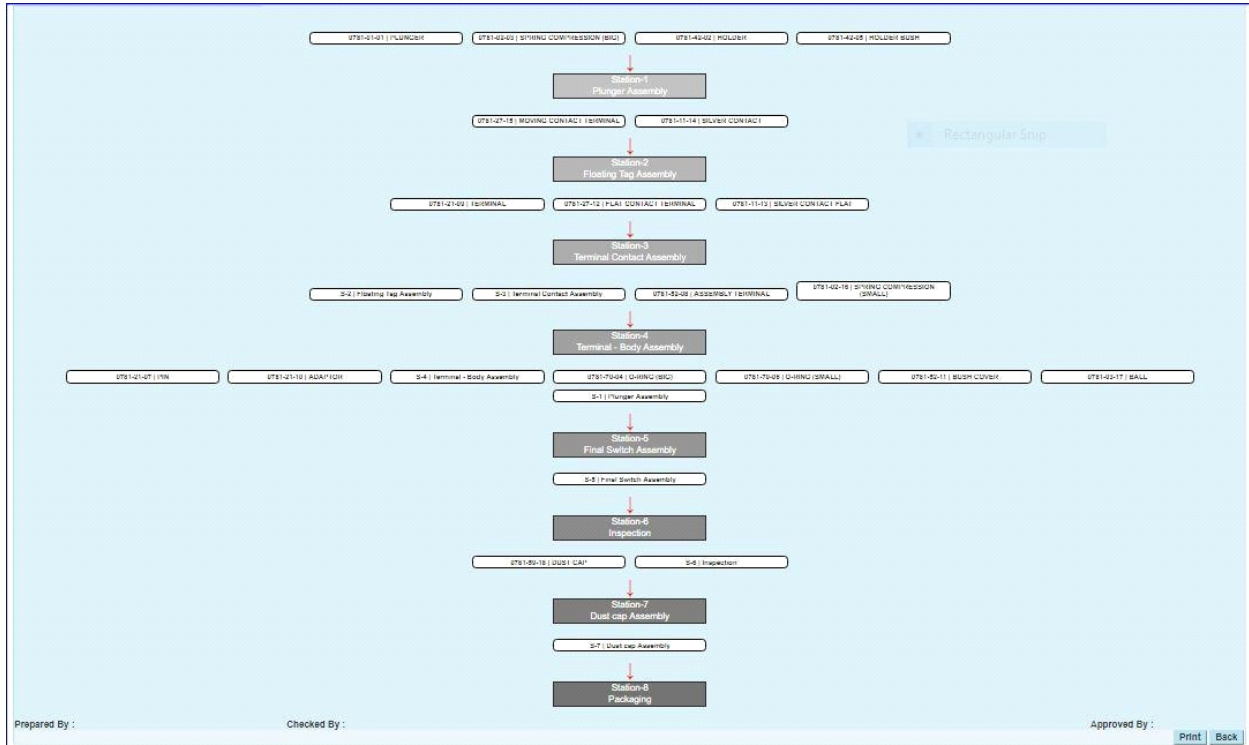
Defining the Process Stations with Required Inputs

Process Flow Chart Of 750-02-Door Switch


GE/F-04/40

S. No.	Stn. No.	Process Description	Inputs	(T)ool / (M)achine / (C)hecking Aids	Cycle Time	Action	Add Input	Delete Input
1	S-10	Soldering of Wire with Terminal	0016-01-02 (FRYSOL PASTE FLUX) 0750-27-14 (FLOATING TERMINAL) 0750-73-16 (PVC WIRE BLACK) 0016-02-01 (Solder Wire (1.0mm dia) lead free)	<div>T --Select Tool  +</div> <div>M --Select Machine-- </div> <div>C --Select--  +</div> <div>Added Tools</div> <div>M-750-001</div> <div>Added Machines</div> <div>Checking Aids</div>	26	<div>Save</div> <div>Add Img.</div>	-Add 	-Del- 
Process Detail : Enter Process Procedure								Save
2	S-20	Assembly of S-1 with Slider	S-1 0750-43-11 (SLIDER)	<div>T --Select Tool  +</div> <div>M --Select Machine-- </div> <div>C --Select--  +</div> <div>Added Machines</div> <div>Checking Aids</div>	31	<div>Save</div> <div>Add Img.</div>	-Add 	-Del- 
Process Detail : Enter Process Procedure								Save
3	S-30	Adhesive Filling	0080-04-22 (ARALDITE (HARDENER & RESIN)) S-2	<div>T --Select Tool  +</div> <div>M --Select Machine-- </div> <div>C --Select--  +</div> <div>Added Machines</div> <div>-000- OPERATOR/ASSEMBLER</div> <div>Checking Aids</div>	125	<div>Save</div> <div>Add Img.</div>	-Add 	-Del- 
Process Detail : Enter Process Procedure								Save
4	S-40	Assembly of S-3 with Body and Spring	S-3 0750-43-10 (BODY) 0750-02-15 (SPRING)	<div>T --Select Tool  +</div> <div>M --Select Machine-- </div> <div>C --Select--  +</div> <div>Added Machines</div> <div>Checking Aids</div>	30	<div>Save</div> <div>Add Img.</div>	-Add 	-Del- 
Process Detail : Enter Process Procedure								Save


Process Flow Chart




Process FMEA Work Sheet



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Process Failure Mode And Effects Analysis (PFMEA) GE/F-04/48 [Child Part PFMEA](#)

--Select Item to Copy --


Item No.:	1266	FMEA Number:	1266	Description	TERMINAL SEAT 4 - WAY (BIG)
Process Responsibility	--select Ecode--	Date (Orig.):		Date (Rev.):	19-11-2019
Core Team:	<div style="display: flex; justify-content: space-between;"> Gagandeep Singh-(NPD) Pankaj Arora-(NPD) </div>			Prepared by	E2406(Ankush Dhiman)E2653(Dron Karkhal)E2652(Ramandeep Kaur)E2317(Neera Chand)

If RPN >100,improvement is required. If SEVERITY=9 and RPN >36,improvement is required. If SEVERITY=8 and RPN >125,improvement is required.

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Function	Requirement	Potential Failure Mode	Potential Effects of Failure	Class (SAFE)	Potential Cause of Failure	Current Control		S	O	D	RPN	Improve RPN	Del
						Occurrence	Detection						
Pad Printing	Clear White Printing	Printing in reverse direction	Pieces not as per drawing &	A, F	Direction of placing part on	Printing Fixture with Poke-Yoke	Visual check	6	2	8	96		
Tag insertion & Cover Fitment	Tag should be inserted Properly	Tag not inserted to full position	Mating with the connectors	F	Tag not pushed to the last	In case of partial insertion, during	Visual check	6	2	8	96		
Screw Tightening	Total Number of Screws is 7	Screw missed	Mating part fitment at	F	Manual operation	Exact quantity of parts would be	Visual Check	6	3	5	90		
Packing	Should be packed as per	Quantity packed less or more	Customer annoyance.	F	No packing standard defined	Exact quantity of parts would be	Material weight is monitored	4	2	6	48		

Process FMEA Print Out



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explore more.

PFMEA of 781-01

GE/F-04/48


(NEUTRAL SAFETY SWITCH (NC TYPE))

Issue:06 Date: 17-11-2017


Item no.		Description	NEUTRAL SAFETY SWITCH (NC TYPE)	Design Responsibility	Talwinder Singh(E2336)	Prepared By	Sanjiv Singh
Date(Revision)	17-11-2017	Date(Original)	17-11-2017	Core Team	Maninderjit Singh-E2324(DES)	Manvinder Kaur-E2227(HRD)	

Function	Potential Failure Mode	Potential Effects of failure	Current Control				Improved Control									
			Occurrence	Detection	S	O	D	RPN	Occurrence	Detection	S	O	D	RPN		
Terminal - Body Assembly	Terminal not resting properly on its original position	Change in pre travel and over travel of the component	1. Length of terminal head is more 2. Stroke length of press is not proper	1. Inspection of Terminal by IGI 2. 5 samples are approved 3. Gauge provided	8	2	5	80					1	1	1	1
Plunger Assembly	1. Pre travel changes 2. Holder and Holder bush cracks	Components gets dis-assembled and does not work	1. Length of plunger is less or more 2. Material is not as per specification 3. Material gets over heated	1. 5 samples are approved 2. Specification sheet of material is provided.	8	2	6	96					1	1	1	1
Final Switch Assembly	1. Flaring of adaptor is not proper	assembled piece will get dis-assembled on pressing of plunger with force	1. Stroke length of press is not proper	1. 5 samples approval 2. Inspection of 10 Pieces by inspector every AWO	8	2	5	80					1	1	1	1
				1. Inspection of 10												


Special Characteristics Matrix

 <div style="float: right;"> Date : 17th of November 2017 Time : 10:30:41 AM User : Sanjiv Singh </div>												
Special Characteristics Matrix												
Special characteristics is a product characteristics that can affect safety or compliance with Regulation, fit function, performance or subsequent process of product.												
Special characteristic can be classified as :												
(1) Safety Characteristics (S) : Are those which affects the product safety, operator safety and compliance with regulatory requirements. (2) Product Characteristics (A) : Are those which affect the aesthetics of product. (3) Fit and Function characteristics (F) : Are those which affect fit and function of product. (4) Environmental characteristics (E) : Are those which are affected by the environment.												
Item number	781-01	Description	NEUTRAL SAFETY SWITCH (NC TYPE)				Customer	C10052-PRICOL LIMITED				
Date(Original)	--	Date(Revision)	--				Project I/C	Talwinder Singh(E2336)				
S.No.	Function	Tolerance	SPL.CHR	Source Of SPL. CHAR.					Control of SPL. CHAR.			
				Cust. Specified	Feasibility Study	CAPA	D/P FMEA	Others	DRG./SPEC.	Control Plan	PQP	Others
1	Push to off at the pressing of plunger											
2	Working voltage 24+- 0.5 V DC											
3	Mounting											
4	Terminal Fitting with Coupler at customer end											
5	Switching point (ON)											
6	Operating Stroke											
7	Operating Force- Contact operation 16N+-20%											
8	Operating Force- At full stroke 25N+-20%											
9	Silver Plating on Terminal											
10	Brass material of Adaptor											
11	Ball											


Inspection Sheet for Layout and PDI (Pre Despatch Inspection)



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Inspection sheet of 1266
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Parameter	Value	+	-	Loc. on Drg.	Spl. Chr.	Inst. type	Instrument	Group	Mark for PDI	Mark to Delete
DIMENSION	47.00	0.3	0.3	1	I	--Select Inst type--	--Select instrument--	--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	10.30	0.2	0.2	2				--Select Group--	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION	7.20	0.2	0.2	3				--Select Group--	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION	45.00	0.3	0.3	4	I	--Select Inst type--	--Select instrument--	--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	4.70	0.2	0.2	5				--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	1.4	0.2	0.2	6				--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	10.00	0.2	0.2	7				--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	11.40	0.2	0.2	8				--Select Group--	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION	26.80	0.3	0.3	9				--Select Group--	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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[Update](#)

Add new parameter

Enter parameter

value

+ tol.

- tol.

location on Drg.

Key

--Select type--

--Select Group--

☐ (Mark to include in PDI)

[Add](#)

Part List

Costed BOM

Functions

DFMEA

PFC

PFMEA

Control Plans

PPAP


Inspection Sheet

PDI

Layout Inspection Sheet


DVP

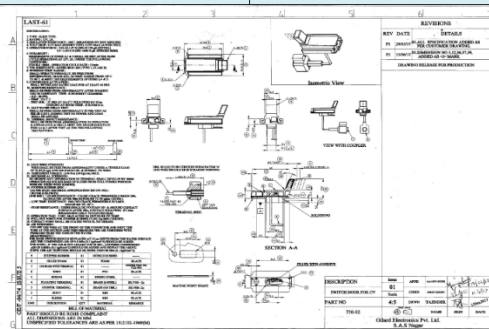
Layout Inspection Sheet

		Layout Inspection Sheet 781-01										Date: 17-11-2017	
		(NEUTRAL SAFETY SWITCH (NC TYPE))										Time 10:31:29am	
GE Part	781-01												
Part Name:	NEUTRAL SAFETY SWITCH (NC TYPE)					Customer:	C10052-PRICOL LIMITED						

Dim. No.	Parameter	Specification			Actual Observations										Range	Decision
		Value	+	-	1	2	3	4	5	6	7	8	9	10		
1	Dimension	20	0.5	0.5												
2	DIMENSION	11	0.2	0.2												
3	DIMENSION	22.20	0.2	0.2												
4	DIMENSION	8.70	0.2	0.2												
5	DIMENSION	10.00	0.2	0.2												
6	DIMENSION	1.60	0.25	0.25												
7	DIMENSION X 2	4	0.1	0.1												
8	DIMENSION (SWITCHING POINT ON)	18.4	0.5	0.3												
9	DIMENSION (OPERATING STROKE)	13		1												
10	DIA (MAX)	29	0.2	0.2												
11	DIMENSION (A/F)	27		0.33												
12	DIMENSION (M18 X 1.5 -6G)															
14	DIMENSION (M27 X1 -6G)															
15	DIMENSION	8.00	0.2	0.2												
16	MARKING DETAILS															
13	DIAMETER	6	0.05	0.05												

PDI Sheet

		PDI of 750-02 (Door Switch)		Date: 28-08-2019	
				Time 02:40:56pm	
				Doc No: GE/F-10/27	
Item :	750-02		No. :		
Part Name:	Door Switch		Customer:	C7453-SML ISUZU LIMITED	
Sample Size For Dimensional Check : (Sampling plan)		Random Data <input type="radio"/> Yes <input checked="" type="radio"/> No		Sample Size For Attribute Check : <input type="text"/> AQL : <input type="text"/>	



Loc	Parameter	Test method	Equipment	Acceptance	
Appearance					
0	No Flash in Moulded part				
0	No Cut marks on insulation of wire.				
0	No Spillage of Araldite on Body				
0	Stopper Rubber should be Properly fit on Slider head				
0	Coupler Terminal should not come outside from Coupler				
Functional					

Checking Aids List

0 NPDP | User Function | Work on projects | PPAP | Instruments and Gauges

Checking Aids List
Instruments & Gauges Used in Project


Part Name: Part Number:

S. No.	Instrument Code	Instrument Description	Least Count	Calibration Last Done	Calibration Next Due	MSA Last Done	MSA Next Due
1	SG044	GAUGE FOR 2162,	-	16-01-2018	15-07-2018	01-07-2016	01-07-2017
2	CR010	MILLIOHM METER	0.001m	26-09-2017	26-09-2018	01-07-2016	01-07-2017
3	EC044	ELECTRONIC CALIPER	0.01MM	11-08-2017	27-02-2018	01-07-2016	01-07-2017
4	EC044	ELECTRONIC CALIPER	0.01MM	11-08-2017	27-02-2018	01-07-2016	01-07-2017


SUPPLIER'S SIGNATURE: Status as on: 03-02-2018

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Skills Required and Available Plan



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Self Diagnostics : TBC = 0.00



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Home Sales Finance NPDP Stores QA Pur HRD PLM e-CAPA Dashboard TPM Mfg. IGI FGI Support Payroll Doc Control Tool PCMD NBD Asset EHS Visitors

NPDP | User Functions | Work on Projects

Define Process, Stations & Skills for : 750-02 Door Switch

--Select item to copy ▾

Qty / Month.	1250	TAKT Time in mins.	9.6	Actual Cycle Time in secs. (ACT) :	322
Qty / Day	50	TAKT Time in secs.	576	Operators Required (ACT*50/28800) :	1

S.No.	Station	Process Name	Delegate to operator	Cycle Time in secs.	Time required for 50 pcs in secs.	Qty used per assy	Skill Required
1.	S-10	+ Soldering of Wire with Terminal	Select operator ▾	26	1300	1	Unskilled
2.	S-20	+ Assembly of S-1 with Slider	Select operator ▾	31	1550	1	Unskilled
3.	S-30	+ Adhesive Filling	Select operator ▾	125	6250	1	Unskilled
4.	S-40	+ Assembly of S-3 with Body and Spring	Select operator ▾	30	1500	1	Unskilled
5.	S-50	+ Terminal Fitting and Locking	Select operator ▾	35	1750	1	Unskilled
6.	S-60	+ Crimping & Insertion of Stopper Rubber and coupler Terminal	Select operator ▾	35	1750	1	Unskilled
7.	S-70	+ Taping of Glued Foam	Select operator ▾	20	1000	1	Unskilled
8.	S-80	+ Inspection	Select operator ▾	20	1000	1	Unskilled
9.	S-90	+ Packaging & Labeling	Select operator ▾		0	1	Unskilled
				322	89 pc per Operator		

S.No.	Operator	Total Available time	Allocated Time
1	Operator1	28800	0

Operator wise Responsibility


Contact HRD Department to create team for this item.

Sr.No	Ecode	Name	Dep	Sec.	Skill
1.	E2461				Unskilled ▾
2.	E0649	Manjit Kaur	ASS	TEAM K	Unskilled ▾
3.	E0897	Karamjit Kaur	ASS	TEAM A	Unskilled ▾
4.	E2426	Karamjit Kaur	ASS	TEAM A	Unskilled ▾

[Update Skills](#)

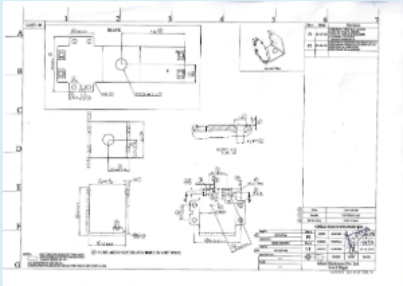
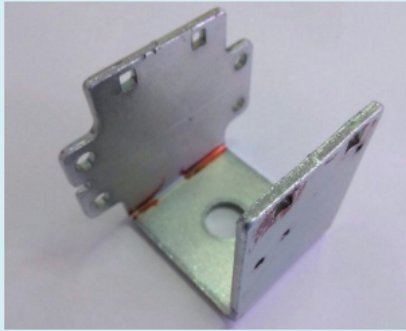
12/16

Skills Development Plan

			Skill Level Planning Sheet For Series 781-01					Date:17-11-2017	
Sr.No	E-Code	Name	As Is	Terminal - Body	Plunger Assembly	Final Switch	Rectangular chip	Dust cap	Packaging
1	E0103	Neelam Devi	H						
2	E0923	Amarjit Kaur	H						
3	E0980	Karamjeet Kaur	H						
4	E0982	Bhavana	H						
5	E1253	Bhupinder Kaur	H						
6	E1310	Pratima Gupta	U						
7	E1378	Sapna Devi	M						
8	E1512	Roshani	M						
9	E1658	Rajni	M						
10	E1734	Gursharan Kaur	M						
11	E1965	Sheetal Kumari	U						

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Child Part Detailing

Child part details			
Child Part number:	2197-07-06	Description:	MAIN CHASSIS
Part type:	CHILD PARTS	Source:	Purchase
Drawing		Picture	
			
Choose File	No file chosen	Choose File	No file chosen
		Update Back	
Raw Material		Plating data	
Drawing		Picture	
		Inspection	
		Control Plan	
		PFMEA	

Child Part Raw material details

Raw Material Information:-		2507-01	FIELD MOULDING (26214560)
RAW MATERIAL USED			
Raw Material Code	0052-00-14 (Rate Rs 200.0084)		
Raw Material Description	NYLON 6/6 33% GF BLACK		
Qty made per NOS of RM	28.000		
Scrap generated per NOS of RM	137.200		
Scrap code:	0052-00-14 (Rs 20.0000)		
Unit	NOS		
Shop	S2410 Inhouse :		
% Re grind allowed	20		
COST OF EXTRA	7.78		
RMC per piece	7.05200.0084 - (0.1372 X 20.0000) / 28.000 = 7.05+7.78=14.83		
EXTRAS USED			
RM CODE	DESCRIPTION	NO PER PIECE	
2507-07-02	'W' LUCAR PLATE	1.00000	
2507-07-03	'WL' PLATE	1.00000	
2507-07-04	FIELD PLATE	1.00000	
2507-27-05	PHASE PLATE	3.00000	

Child Part Processing Details

Machine Setup of Item No. 2507-01 / FIELD MOULDING (26214560)											
Seq. No	Process	M/c. Code	Machine Description	Cycle Time in secs	No of Cavities	Qty Per Hour	Tool No.	Shop	Other Family Members	Process Cost	Action
01	INSERT MOULDING	M0020	T56 MULTIPLAS VERTICAL MC 3 - 55 T	78.00	1	48	2507-01-A1	S2410	None	5.78	SAVE DROP
	Alternate Machine	M0008	T30 MULTIPLAS VERTICAL MC 1 - 30T	130.91		0				0	SAVE DROP
	Set As Default										
Total Process Cost in (Rs)										5.78	

Child Part Finishing details


Plating Data : 2507-07-02 ('W' LUCAR PLATE)			
Surface Area in mm square	836.00	No. of pcs.in 1 Kg	487
Surface Area of 1 kg in dm square	40.7132		
Under Coat	COPPER	2.50	Microns
Plating	NICKEL	8.50	Microns
Finishing Cost Per pc.(in Rs.)	0.34		
Special Instruction For Plating	PLATING TO BE DULL & PLATING SPECIFIED IS MINIMUM.		

Child Part Control Plans

Childpart Control Plans

Item No. 2507-01 (FIELD MOULDING (26214560))

2507-52-01.pdf 1 / 1

PROCESS NO.	PROCESS NAME/OPERATION	NAME OF M.C. TOOL, LNS FOR WPL	PART	CHARACTERISTICS	PROCESS	MTL	PART / PROCESS SPEC. ITS RANGE	METHOD EVALUATION/ MEASUREMENT TECHNIQUES	SAMPLE	CONTROL METHOD	RESP.	REACTION PLAN
	CHECKING OF PH. ORIENTATIONS OF TOOL.	Gauge (2627-02-01)		PLACE 50 254 GAUGE ON THE TOOL. (As a Place Note to prevent wrong part manufacturing due to similar type of variants, On Gauge provided to operator for checking at final entry stage)			GAUGE SHOULD FIT EASILY ON TOOL.	MANUALLY	BEFORE EVERY PWO	PATROL INSPECTION GSP-1000	OPERATOR	-INFORM MC TOOL TO BE SENT TO TO ROOM FOR CHANGING OF
	PRE HEATING	HOPPER-MULTIPLAS	RAW MATERIAL	PRE HEATING TEMPERATURE			120 DEGREES	DIGITAL TEMPERATURE CONTROLLER OF HOPPER (MULTIPLAS)	EVERY TWO	CHECK THE LEVEL OF MATERIAL IN HOPPER AND REFILL WHEN LEVEL IS LOW	OPERATOR	IF MOULDING DEFECT OBSERVED REFER GSP-1000
	Insert Terminal	WPL-000-14	NYLON 16 254 GP	PRE HEATING TIME			1 HOUR	Visual	EVERY FIVE	100 % MONITORING	OPERATOR	-REJECT DEFORMED, UNPLATED TERMINALS. PLATING TERMINALS PUT IN REWORK
	Insert Terminal	WPL-000-14	NYLON 16 254 GP	Insert Terminal (2627-02-01) (Fig. 1)				Visual	EVERY FIVE	100 % MONITORING	OPERATOR	-REJECT IF TERMINAL NOT INSERTED IN TOOL CAVITY PUT IN REWORK
	Insert Terminal	WPL-000-14	NYLON 16 254 GP	Insert Terminal (2627-02-01) (Fig. 1)				Visual	EVERY FIVE	100 % MONITORING	OPERATOR	-REJECT IF TERMINAL NOT INSERTED IN TOOL CAVITY PUT IN REWORK

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Part Submission Warrant

Part Submission Warrant

Part Name		Cust. Part Number	
Shown on Drawing No.		Org. Part Number	
Engineering Change Level		Dated	
Additional Engg. Changes		Dated	
Safety and/or Government Regulation	<input type="checkbox"/> yes <input type="checkbox"/> no	Purchase Order No.	
Checking Aid No.		Weight	
Checking aid Engineering change level:		Dated	

Organisation Manufacturing Information				Customer Submittal Information	
Organization Name & Supplier/Vendor Code				Customer Name/Division	
Street Address				Buyer/Buyer Code	
City	Region	Postal Code	Country	Application	

Materials Reporting

Has customer-required Substances of Concern information been reported? ☐ Yes ☐ No ☐ N/A

Submitted by IMDS or other customer format:




Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☐ N/A

Reason for submission (check atleast one)

<input type="checkbox"/> Engineering change(s)	<input type="checkbox"/> Supplier/Material source change
<input type="checkbox"/> Tooling: Transfer, Replacement, Refurbishment or additional	<input type="checkbox"/> Change in part processing
<input type="checkbox"/> Correction of Discrepancy	<input type="checkbox"/> Parts produced at additional location
<input type="checkbox"/> Tooling inactive > than 1 year	<input type="checkbox"/> Other- please specify below

Requested Submission Level (Check one)

PPAP Documents

Gilard Electronics Pvt Ltd

Self Diagnostics : TBC = 0.00

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Gagandeep Kaur

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NPD | User function | Work on projects | PPAP

PPAP Index

1 PPAP Checksheet	2 PSW	3 Checking Aids (Instruments, Equipment and Gauges)	4 Process Capability Studies	5 Raw Material Suppliers	6 Child Part Suppliers	7 In-House Produced Parts	8 Process Control Documents (LPA, Patrol Card, Process Sheet)
9 Appearance Approval Report	10 Photo BOM	11 Technical Sheet					

Part List	Costed BOM	Functions	DFMEA	PFC	PFMEA
Control Plans	PPAP	Inspection Sheet	PDI	Layout Inspection Sheet	DVP
Performance Test	SCM	PND	Status	Project Sign Off	Project Learning
Packing Standard	ROHS Review	Raise Indents			

Gilard Application Programmers LLP

C-132, Phase VIII,
Industrial Area, Mohali,
PUNJAB INDIA

www.gaposm.com

sanjiv@gaposm.com

0172-5020510
+91-9888111773

