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Home Sales Finance **NPD** Stores QA Purchase HRD PLM e-CAPA Dashboard TPM Mfg. IGI FGI TECH Support Payroll Doc Control Tool Room PCMD NBD

Reporting >>>
User Functions >>>
Supervisor Options >>>

Product Development

Sitemap | User | Administrator | Super Administrator | Main Module | Raise a Ticket | View Tickers | Data Exporter | **Readme** | Add Page to Favourite | Function file | Help [F2] [Esc]

New Product Development Module

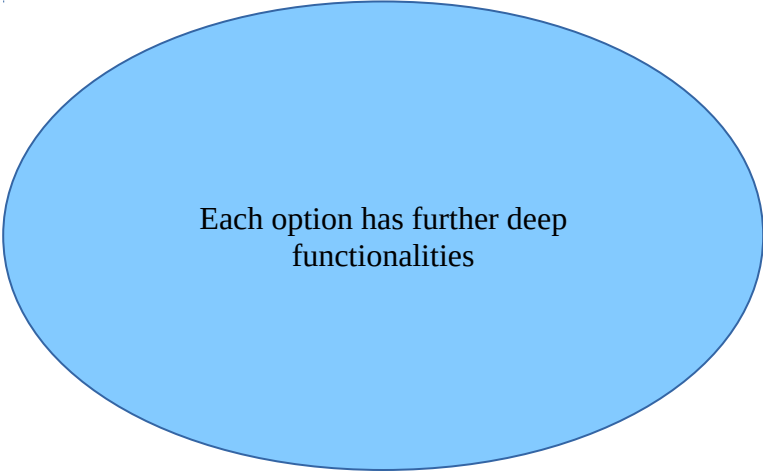
GAP OSM's NPD (New Product Development) module ensures a smooth Design & Development Activity which is based on APQP and simultaneously prepares all the required PPAP documentation.

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




Each option has further deep functionalities


Project Initiation



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Reporting ▾

User Functions ▾

Supervisor Options ▾

NEW PROJECT INITIATION [Review open projects](#)

Date: 16-11-2017 IDC No.: --Select IDC NO----

Product Description:

Product Purpose:

Customer Part No. Enter cust. Part no. Product No. allocated: Verify if this product number already exist

Annual Qty: Project Life Expected:

Sale Price: Target Cost:

Target date of Completion:

Project Designated to: --select--


Annual Revenue: 0 Lifetime Revenue: 0

Development Charges Advance(against PO) : Balance(before bulk shipment) :


[Save and Exit](#) [Cancel](#)

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Projects Listing



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NPD | User Function | Work on projects

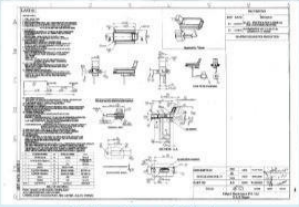

List of Projects

S.No.	Date	Customer	Product No.	Skill Matrix	Product Description	Status							
						BOM	Drg.	DRC	Tool Design	Tooling	Tool trial	Ver.	final
1	28-09-2016	C4415-LUCAS- TVS LIMITED	2519-RMS	NA	Regulator Moulding		●						
2	02-11-2016	C10056-NIDEC INDIA PVT. LTD	2214-03N	NA	RADIATOR RESISTOR	●	●						
3	02-11-2016	C7749-SUBROS LTD	2302-01S	NA	RESISTOR BLOWER	●	●						
4	02-11-2016	C2883-HONDA MOTOR INDIA PVT.LTD.	997-18S	NA	PLUG	●	●						
5	02-11-2016	C2883-HONDA MOTOR INDIA PVT.LTD.	995-07S	NA	RECEPTACLES (240V-6A)	●	●						
6	02-11-2016	C2883-HONDA MOTOR INDIA PVT.LTD.	997-08S	NA	RECEPTACLES (250V-15A)	●	●						
7	02-11-2016	C6146-PREET TRACTORS PVT. LTD.	762-03PR	NA	BRAKE LIGHT SWITCH								
8	02-11-2016	C10026-IFB AUTOMOTIVE PVT. LTD.	2214-01I	NA	RADIATOR RESISTOR	●	●						
9	02-11-2016	C10022-KINETIC ELECTRIC MOTOR CO PRIVATE LIMITED	2214-03K	NA	RADIATOR RESISTOR	●	●						








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Working on Individual Product

Home	Sales	Finance	NPD	Stores	QA	Purchase	HRD	PLM	e-CAPA	Dashboard	TPM	Mfg.	IGI	FGI	TECH Support	Payroll	Doc Control	Tool Room	PCMD	NBD		
NPD User Function Work on projects																						
Product Code	750-02			Description	Door Switch			Project I/C	E2167(Ankush Dhiman)E1366(Gurjinder Singh)E2242(Atul Vashisth)													
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	2.55									
Annual Qty.	15,000.00			Project Life Expected	5.00 years			Annual Revenue	10,05,000.00			Lifetime Revenue	50.00									
Drawing											Picture											
 <p style="text-align: center;"> <input type="radio"/> Medium <input type="radio"/> Large <input type="radio"/> Extra Large </p>											 <p style="text-align: center;"> <input type="radio"/> Medium <input type="radio"/> Large <input type="radio"/> Extra Large </p>											
Choose File No file chosen Upload drawing											Choose File No file chosen Upload Picture											
Functions	DVP	DFMEA	PFMEA	Control Plan	Costed BOM	Part list	Inspection Sheet	Status	Back													
PFC	Assy Process	PPAP	SCM	Layout Inspection Sheet	Performance Test	PDI	PND															


Function Identification & Study / Quality Function Deployment (QFD)

					
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Home Sales Finance NPD Stores QA Purchase HRD PLM e-CAPA Dashboard TPM Mfg. IGI FGI TECH Support Payroll Doc Control Tool Room PCMD NBD					
NPD User Function Work on projects Functions					
Product Functions of 750-02(Door Switch)					
Sr.No	Main Function	Specific Needs			
		Enter new function based specific need			
1.	Air Tightness: Cut off the wire at the front of the connector and joint the tube at the section and then measure the air tightness with pressure from the tube in the water. Measurement: The door switch should be placed at 10cm Depth from the water surface and the compressed air of 9.8 Mpa (0.1 kgf/cm ²) should be added for 30 sec. If the air is not leaked for 30 sec., Another compressed air of 9.8 Mpa (0.1 kgf/cm ²) should be added and repeat the above steps. The air tightness should be more then 98 Mpa (0.1 kgf/cm ²)				
2.	Contact point shall be coated with EL-363 Grease.				
3.	Continuous Activation : Shall withstand rated load for at least 48 Hrs.				
		Depends on	Raw Material	Process	Dimension
		0750-00-01-WIRE HARNESS	AVS 0.5 Wire-		
		0750-27-12-STOPPER TERMINAL	-		Silver Plating 2 Micron
		0750-27-14-FLOATING TERMINAL	-		Silver Plating 2 Micron
4.	DURABILITY: Requirement of items 1,2 & 4 shall be met after 40,000 cyce operation at 12V,2A under the following conditions: Stroke: 8 mm, Operation cycle Rate:15/Min.				
		Depends on	Raw Material	Process	Dimension
		0750-02-15-SPRING	-		Spring Constant 394±10% N/M
		0750-27-12-STOPPER TERMINAL	Vicker Hardness 110 VPN Min.-		Silver Plating 2 Micron
		0750-27-14-FLOATING TERMINAL	Vicker Hardness 110 VPN Min.-		Silver Plating 2 Micron


Quality Function Deployment (QFD)

 Gilard Electronics Pvt Ltd		Quality Function Deployment of 781-01-NEUTRAL SAFETY SWITCH (NC TYPE)		Date : 17th of November 2017 Time : 10:01:45 AM User : Sanjiv Singh	
Part List	Random Vibration Test according to ISO 16750-3:2003 for 32 hours Low Temperature Test for Storage at -40°C for 24 hours Control the Switching Point and Operating Stroke Operating Force 16 N +/- 20 % for Contact breaking and 25 N +/- 20 % for Full Stroke Overload Forces, 100 N applied 10 mm from the tip of the switch in any direction.				
0781-01-01-PLUNGER		D		R	
0781-21-10-ADAPTOR		D	PD	R	
0781-52-06-ASSEMBLY TERMINAL		D	PD	R	D
0781-21-07-PIN		D			
0781-02-03-SPRING COMPRESSION (BIG)		D			
0781-02-16-SPRING COMPRESSION (SMALL)		D		D	D
0781-42-02-HOLDER		RP			


Design Validation Plan (DVP)



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Design Validation Plan of 750-02(Door Switch)

Performance

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Test	Method	Specification		Checked By	Instrument	Time for testing	No. of Samples	Select to del.
		Initial	Final					
Rating	<input type="text"/>	12 Volts.2An	12 Volts.2An	Self	--Select instrument			<input type="checkbox"/>
Insulation Resistance	<input type="text"/>	1M Ohms	1M Ohms	Self	IT-INSULATION TE	1Day		<input type="checkbox"/>
Voltage Drop	<input type="text"/>	0.1 V	0.25 V	Self	--Select instrument	1Day		<input type="checkbox"/>
Operating Force	<input type="text"/>	300(-150)G	500(+200)G	Self	--Select instrument	1Day		<input type="checkbox"/>

Endurance



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Test	Method	Specification		Checked By	Instrument	Time for testing	No. of Samples	Select to del.
		Initial	Final					
Durability	<input type="text"/>	12 Volts.2An	12 Volts.2An	Self	--Select instrument	4Day		<input type="checkbox"/>
Vibration Resistance	<input type="text"/>			Customer	--Select instrument			<input type="checkbox"/>
Continuous Activation	<input type="text"/>			Self	--Select instrument	3 Days		<input type="checkbox"/>


Performance Testing Sheet

		DVP-Performance Testing of 750-02			Date: 16-11-2017	
		(Door Switch)			Time 04:48:30pm	
Part Name: 750-02-Door Switch		Customer: C7453-SML ISUZU LIMITED		Rectangular Strip		
Performance Test(Initial)						
S.no.	Test	Method	Equipment	Specification		
				Specified	Observed	Result
1	Rating	12Volts,2Amperes		12 Volts,2Amperes		
2	Insulation Rasistance	1M Ohms	IT006-INSULATION TESTER	1M Ohms		
3	Voltage Drop	0.1 V Max (Before Test) & 0.25 V Max (After Test)		0.1 V		
4	Operating Force	300(-150) gf Intial Force , 500 (+200) gf After 8 mm Stroke		300(-150)Gf		
Climatic/Endurance Test						
1.Durability						
Test: Durability						
Method: Shall Fullfill Above Sr. No.2,3,4 after 40000 cycles, Conditions: 12V,2A Stroke 8 mm Operation Cycle Rate-15 SPM						
Equipment :						
Performance(Final)						
S.no.	Test	Method	Equipment	Specification		
				Specified	Observed	Result
1	Rating	12Volts,2Amperes		12 Volts,2Amperes		
2	Insulation Rasistance	1M Ohms	IT006-INSULATION TESTER	1M Ohms		


Product Costing Sheet

		new product design										
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NPD User Function Work on projects												
BILL AND COST OF MATERIAL												
Cat No. : 750-02		Description : Door Switch		Sub Assy : N		Team : Production per Man Day : 0						
S.No.	Part No.	Description	Source	Qty Per Piece	Unit	Is it a Sub Assy	Purchase Cost	Raw Material Cost	Process Cost	Finishing Cost	Total Cost	Amount
6	0750-02-15	SPRING	Purchase	1	NOS	N	0.45	0	0	0	0.45	0.45
7	0750-60-19	GLUED FOAM	Purchase	1	NOS	N	0	0	0	0.00	0	0
	0060-03-01	SELF ADHESIVE GLUED FOAM (G)	Purchase	0	MTR		0	0	0	0	0	0
8	0016-02-01	Solder Wire (1.0mm dia) lead free	Purchase	0.05	GMS	N	1.68	0	0	0	1.68	0.084
9	0016-01-01	HYBRID#6633 SOLDER CONDITIONER	Purchase	0.02	MLT	N	0.2025	0	0	0	0.2025	0.00405
10	0750-00-01	WIRE HARNESS	Purchase	1	NOS	N	0	0	0	0	0	0
11	0080-04-22	ARALDITE (HARDENER & RESIN)	Purchase	1.5	GMS	N	0	0	0	0	0	0
TOTAL							0.54	0.57	0.16	1.31		
Edit												


Part List with details



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e-CAPA
Dashboard
TPM
Mfg
IGI
FGI
TECH Support
Payroll
Doc Control
Tool Room
PCMD
NBD

NPD | User Function | Work on projects

Part List

Item Description: NEUTRAL SAFETY SWITCH (NC TYPE)

Item No.: 781-01

Drawing available: Y

Design Plan No.:

Prepared by: Sanjiv Singh-D0003

Customer: PRICOL LIMITED

Action Required:

Sub Assy: N


Prod. per MAN day: 0

Assy. Cost: 0


[save](#)

S.No.	Part No.	Description	Qty/Pc.	Sub Assy (Y/N)?	Item Source	Cost	Drawing/SPCN no.	Drawing Available	Click to Del.
1	0781-42-02	Design Review HOLDER	1	N	Inhouse	0	07814202.jpg	Y	
2	0781-02-03	Design Review SPRING COMPRESSION (BIG)	1	N	Purchase	0	07810203.jpg	Y	
3	0781-70-04	Design Review O-RING (BIG)	1	N	Purchase	0	07817004.jpg	Y	
4	0781-42-05	Design Review HOLDER BUSH	1	N	Inhouse	0	07814205.jpg	Y	
5	0781-70-06	Design Review O-RING (SMALL)	1	N	Purchase	0	07817006.jpg	Y	
6	0781-21-07	Design Review PIN	1	N	Inhouse	0	07812107.jpg	Y	
7	0781-52-08	Design Review ASSEMBLY TERMINAL	1	N	Inhouse	0	07815208.jpg	Y	
8	0781-21-09	Design Review TERMINAL	2	N	Inhouse	0	07812109.jpg	Y	
9	0781-21-10	Design Review ADAPTOR	1	N	Purchase	0	07812110.jpg	Y	
10	0781-52-11	Design Review BUSH COVER	1	N	Inhouse	0	07815211.jpg	Y	
11	0781-27-12	Design Review FLAT CONTACT TERMINAL	2	N	Inhouse	0	07812712.jpg	Y	


Development Status Review



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Doc Control
Tool Room
PCMD
NBD

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Status of 781-01 (NEUTRAL SAFETY SWITCH (NC TYPE))

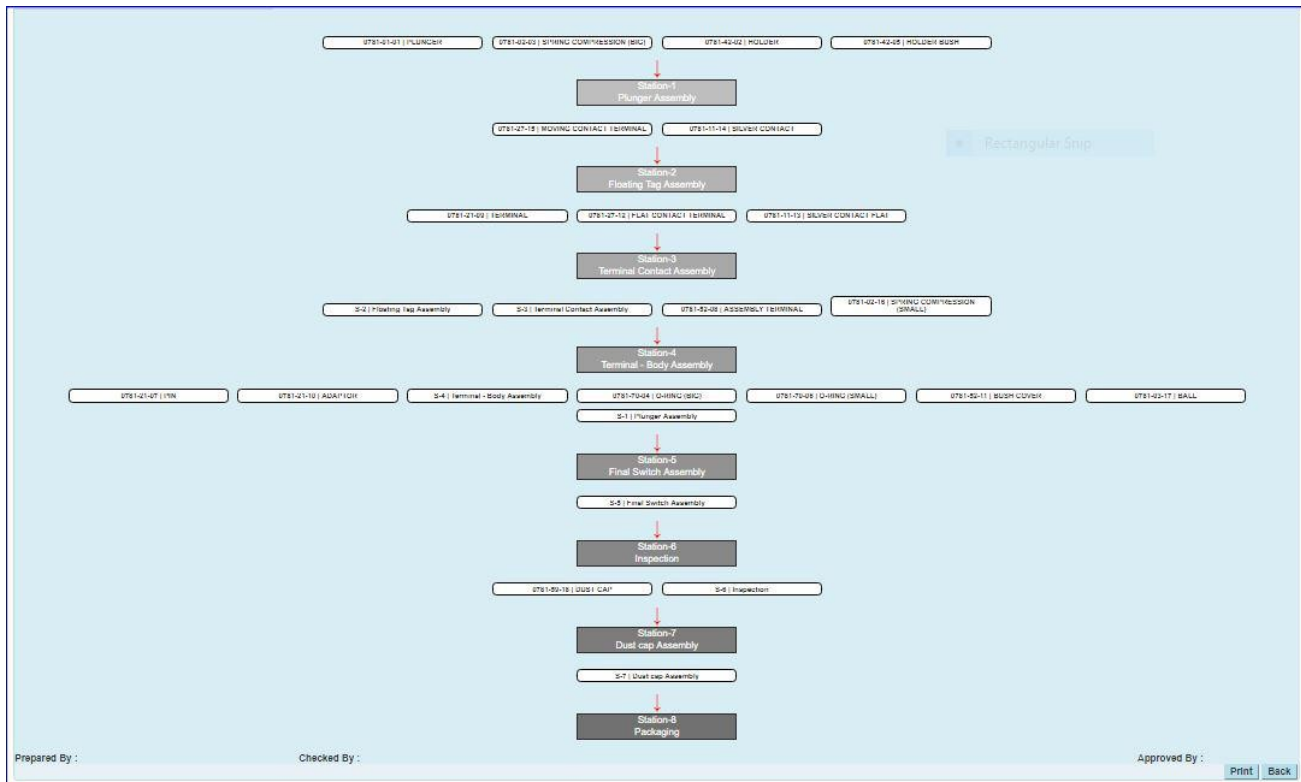
R-Required, S-Submit, A-Approved

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	20-09-2017								24-09-2017				25-09-2017			30-09-2017			01-11-2017			01-11-2017			
EDC	23-09-2017								25-09-2017				07-10-2017			14-11-2017			09-11-2017			11-11-2017			
0781-70-04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	--Select--	<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"/>		Not required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0781-42-05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	--Select--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Injection Moulded along with 0781-42-02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Not required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0781-70-06				--Select--	<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"/>		Not required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0781-21-07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	--Select--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	In Auto shop on Sliding head	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Not required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0781-52-08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	--Select--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Injection Moulded Family mould with Bush Cover (0781-52-11)	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	


Defining the Process Stations with Required Inputs

Process Flow Chart Of 781-01-NEUTRAL SAFETY SWITCH (NC TYPE)						
S.No.	Station No.	Process Name	Inputs	Add	Delete	
1	S-1	Plunger Assembly	0781-01-01 (PLUNGER) 0781-02-03 (SPRING COMPRESSION (BIG)) 0781-42-02 (HOLDER) 0781-42-05 (HOLDER BUSH)	-Add-	-Del-	
2	S-2	Floating Tag Assembly	0781-27-15 (MOVING CONTACT TERMINAL) 0781-11-14 (SILVER CONTACT)	-Add-	-Del-	
3	S-3	Terminal Contact Assembly	0781-21-09 (TERMINAL) 0781-27-12 (FLAT CONTACT TERMINAL) 0781-11-13 (SILVER CONTACT FLAT)	-Add-	-Del-	
4	S-4	Terminal - Body Assembly	S-2 (Floating Tag Assembly) S-3 (Terminal Contact Assembly) 0781-52-08 (ASSEMBLY TERMINAL) 0781-02-16 (SPRING COMPRESSION (SMALL))	-Add-	-Del-	
5	S-5	Final Switch Assembly	0781-21-07 (PIN) 0781-21-10 (ADAPTOR) S-4 (Terminal - Body Assembly) 0781-70-04 (O-RING (BIG)) 0781-70-06 (O-RING (SMALL)) 0781-52-11 (BUSH COVER) 0781-03-17 (BALL) S-1 (Plunger Assembly)	-Add-	-Del-	
6	S-6	Inspection	S-5 (Final Switch Assembly)	-Add-	-Del-	
7	S-7	Dust cap Assembly	0781-59-18 (DUST CAP) S-6 (Inspection)	-Add-	-Del-	
8	S-8	Packaging	S-7 (Dust cap Assembly)	-Add-	-Del-	


Process Flow Chart




Process FMEA Work Sheet



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Payroll
Doc Control
Tool Room
PCMD
NBD

NPD | User Function | Work on projects | Partlist | Child part detail | DFMEA


Process Failure Mode And Effects Analysis (PFMEA) Child Part PFMEA

Item No.:	781-01	FMEA Number:	781-01	Description	NEUTRAL SAFETY SWITCH (NC TYPE)
Process Responsibility	E2336(Talwinder Singh)	Date (Orig.):	17-11-2017	Date (Rev.):	17-11-2017
Core Team:	Maninderjit Singh-E2324(DES)		Manvinder Kaur-E2227(HRD)		Prepared by
Add core team member					E2336(Talwinder Singh)

If RPN >100,improvement is required. If SEVERITY=9 and RPN >36,improvement is required. If SEVERITY=8 and RPN >72,improvement is required.
 [Save](#)

Function	Potential Failure Mode	Potential Effects of Failure	Current Control		S	O	D	RPN	Improve RPN	Select to delete
			Occurrence	Detection						
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	1. Inspection of Terminal by IGI	8	2	5	80	<input type="checkbox"/>	<input type="checkbox"/>
Plunger Assembly	1. Pre travel changes 2. Holder and Holder	Components gets dis-assembled and does not work	1. Length of plunger is less or more	1. 5 samples are approved	8	2	6	96	<input type="checkbox"/>	<input type="checkbox"/>
Final Switch Assembly	1. Flaring of adaptor is not proper	assembled piece will get dis-assembled on	1. Stroke length of press is not proper	1. 5 samples approval 2. Inspection of 10	8	2	5	80	<input type="checkbox"/>	<input type="checkbox"/>
Inspection	1. Pre travel and over	1. Does not work properly	1. Fatigue of Worker	1. Inspection of 10	8	2	5	80	<input type="checkbox"/>	<input type="checkbox"/>

Process FMEA Print Out



PFMEA of 781-01

(NEUTRAL SAFETY SWITCH (NC TYPE))


GE/F-04/48

Issue:06 Date: 17-11-2017


Item no.	781-01	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		S	O	D	RPN	Improved Control							
			Occurrence	Detection					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 3. Pieces by inspector every AWO	8	2	5	80					1	1	1	1
			1. Fatigue of	1. Inspection of 10 samples by												


Special Characteristics Matrix

		Special Characteristics Matrix				Date : 17th of November 2017 Time : 10:30:41 AM User : Sanjiv Singh							
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)



Gilard Electronics Pvt Ltd
Self Diagnostics : TBC = 0.00



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NPD | User Function | Work on projects | Inspection Sheet

Inspection sheet


Parameter	Value	+	-	Loc. on Drg.	Spl. Chr.	Inst. type	Instrument	Group	Mark for PDI	Mark to Delete
Dimension	20	0.5	0.5	1	I	EC-ELECTRO	--Select instrui	Layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	11	0.2	0.2	2	I	--Select Inst ty	--Select instrui	Layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	22.20	0.2	0.2	3				Layout	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION	8.70	0.2	0.2	4				Layout	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION	10.00	0.2	0.2	5	I	--Select Inst ty	--Select instrui	Layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION	1.60	0.25	0.25	6				Layout	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION X 2	4	0.1	0.1	7				Layout	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSION (SWITCHING)	18.4	0.5	0.3	8	I	--Select Inst ty	--Select instrui	Performance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DIMENSION (OPERTING)	13		1	9	I	--Select Inst ty	--Select instrui	Performance	<input checked="" type="checkbox"/>	<input type="checkbox"/>

[Update](#)


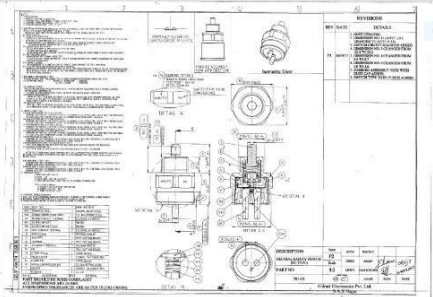
Add new parameter

Enter parameter value +tol. -tol. location on Drg. Key --Select type --Select Group-- (Mark to include in PDI) [Add](#) [Back](#)

Layout Inspection Sheet

		Layout Inspection Sheet 781-01 (NEUTRAL SAFETY SWITCH (NC TYPE))										Date: 17-11-2017 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 (OPERTING 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 781-01 (NEUTRAL SAFETY SWITCH (NC TYPE))										Date: 17-11-2017 Time: 10:32:46am
GE Part:	781-01											
Part Name:	NEUTRAL SAFETY SWITCH (NC TYPE)					Customer:	C10052-PRICOL LIMITED					
												
Sl. No.	Parameter	Test Method	Equipment	Acceptance	Satisfies							
					SI	SA	SI	SA				
Acceptance												
1. SWITCHING DETAILS												
1	Dimension	NC		20.00 ± 0.50								
2	Dimension			11.00 ± 0.20								
3	Dimension			22.20 ± 0.20								
4	Dimension			8.70 ± 0.20								
5	Dimension			10.00 ± 0.20								
6	Dimension			1.60 ± 0.25								
7	Dimension			4.00 ± 0.10								
8	Dimension			18.40 ± 0.50								
9	Dimension			13.00 ± 1.00								
10	Dimension			29.00 ± 0.20								
11	Dimension			27.00 ± 0.33								
12	Dimension			6.00 ± 0.05								
13	Dimension			8.00 ± 0.20								
14	Dimension			2.00 ± 0.20								
15	Dimension			8.00 ± 0.20								
16	Marking			NC								

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	07-02-2018	01-07-2016	01-07-2017
4	EC044	ELECTRONIC CALIPER	0.01MM	11-08-2017	07-02-2018	01-07-2016	01-07-2017


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

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Skills Required and Available Plan



Gilard Electronics Pvt Ltd
Self Diagnostics : TBC = 0.00



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NPD | User Functions | Work on Projects

Define Process, Stations & Skills for : 781-01 NEUTRAL SAFETY SWITCH (NC TYPE) --Select item to copy ▾

Unskilled
Medium Skilled
High Skilled
Critical

Contact HRD Department to create team for this item.

Sr.No.	Station No.	Process Name	Skill Required	Sr.No	Ecode	Name	Dep	Sec.	Skill
1.	S-1	Terminal - Body Assembly	●	1.	E0103	Neelam Devi	ASS	TEAM B	High Skill ▾
2.	S-1	Plunger Assembly	●	2.	E0923	Amarjit Kaur	ASS	TEAM B	High Skill ▾
3.	S-2	Final Switch Assembly	●	3.	E0982	Bhavana	ASS	TEAM B	High Skill ▾
4.	S-3	Inspection	●	4.	E1253	Bhupinder Kaur	ASS	TEAM B	High Skill ▾
5.	S-4	Dust cap Assembly	●	5.	E1734	Gursharan Kaur	ASS	TEAM B	Medium S ▾
6.	S-5	Packaging	●	6.	E0980	Karamjeet Kaur	ASS	TEAM B	High Skill ▾
				7.	E1310	Pratima Gupta	ASS	TEAM B	Unskilled ▾
				8.	E1658	Rajni	ASS	TEAM B	Medium S ▾
				9.	E1512	Roshani	ASS	TEAM B	Medium S ▾
				10.	E1378	Sapna Devi	ASS	TEAM B	Medium S ▾
				11.	E1965	Sheetal Kumari	ASS	TEAM B	Unskilled ▾

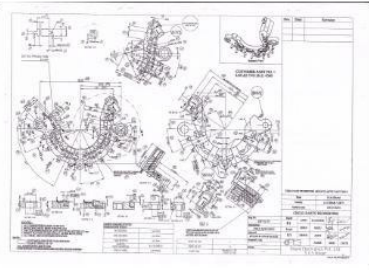

Update Skills

Skills Development Plan

Gilard explore more...		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	Inspection	Dual 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			
Select Number	2507-01		
Description	FIELD MOULDING (26214560)		
Change Part Type	FINISHED PRODUCT		
Change Source	In-house		
Vendor Code	S2410 GILARD MOULDING SHOP		
<input type="button" value="update"/>			
Drawing	Picture		
			
<input type="button" value="Upload new Drawing"/>	<input type="button" value="Upload new Picture"/>		
Plating Data	Master Data	Raw Material	Multiple Part Usage
Source Information	Machine Setup	Control Plans	Design FMEA
Process FMEA	Picture	Drawing	Inspection Sheet
Price Trending	History Sheet		

Back

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 Cavi- ties	Qty Per Hour	Tool No.	Shop	Other Family Members	Process Cost	Action
01	INSERT MOULDING	M0020	T55 MULTIPLAS VERTICAL MC 3 - 55 T	78.00	1	46	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

SUSPENSE STATE		OF Moulding Step	PART NO	ISSY-01-01	CUSTOMER	LOGS-010	ORG. DATE	REV. DATE	REV. DATE	ISSUE 1
CONTROL PLAN NO.		CP100701	PART NAME	Part Moulding	CUSTOMER PART NO	20 21 4569				
LINE ITEM / ATTACHE	PROCESS NAME/ OPERATION DESCRIPTION	NAME OF MC TOOL/LIN FOR MFG	PART	CHARACTERISTICS	SP. DATA	METHOD	CONTROL METHOD	RESP.	REACTION PLAN	
PROCESSES NO.										
	CHECKING OF PRG ORIENTATIONS OF TOOL.	Gauge (262145-01)		PLACE 50 024 GAUGE ON THE TOOL. (As a Pre-Tool to prevent using part manufacturing die in similar type of variants. On change provided to operator by checking of tool service angle)		MANUALLY	PATROL INSPECTION GSP-1003	OPERATOR	- INFORM IC - TOOL TO BE SENT TO TO ROOM FOR CHANGING OF I	
	PRE HEATING	HOPPER MULTIPLAS	RAW MATERIAL NYLON 66 20% GF	PRE HEATING TEMPERATURE PRE HEATING TIME		DIGITAL TEMPERATURE CONTROLLER OF HOPPER MULTIPLAS TRUCK	CHECK THE LEVEL OF MATERIAL IN HOPPER AND REFILL WHEN LEVEL IS LOW	OPERATOR	- IF MOLDING DEFECT OBSERVED REFER GSP-1003 Act accordingly	
	Insert Terminals "M" LUGS PLATE (262145-01 X 1)			- INSERT "M" LUGS PLATE (262145-01 X 1) IN LOWER PART OF DIE. IT USE REVOLVING TRUCK. - Fix the Insert in tank. - Insert Field Plug (262145-01 X 1) (It needs to be with empty Mould GAUGE) (Fig. 1)		Visual	EVERY FWD	100 % MONITORING	- REJECT DEFORMED, IMPLETED TERMINALS PLATING TERMINALS PUT IN RE-DRUM - REJECT IF TERMINAL NOT INSERTED IN TOOL CAUTION PUT IN RE-DRUM - IF TERMINAL DEFORMED DURING INSPECTION, REPLACE IT WITH NEW ONE	
	Insert Terminals "M" LUGS PLATE (262145-01 X 1)			- Use soft PLASTIC STOCK to press in huge 200 Lbs. Center Spgn. - Terminals should insert easily		Visual	EVERY FWD	100 % MONITORING	- Terminals should insert easily in cavity. - Deformed terminals not to be used - Terminals should be plated - Terminals should all completely in cavity of the core	

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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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A					
Submitted by IMDS or other customer format: _____					
Are polymeric parts identified with appropriate ISO marking codes? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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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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 Packing Standard	10 Appearance Approval Report	11 Photo BOM	12 Technical Sheet	13 Raise Indents			

Part list	Costed BOM	Functions	DFMEA	Assy Process and skill development	PFC	PFMEA	Control Plan	PPAP
Inspection Sheet	PDI	Layout Inspection Sheet	DVP	Performance Test	SCM	PND	Status	Project Sign Off

Gilard Application Programmers LLP

C-132, Phase VIII, 2nd Floor
Industrial Area, Mohali, PUNJAB
INDIA

www.gaposm.com

sanjiv@gaposm.com

0172-5020510
+91-9888111773

