Phase and submission type
(○) Phase 1 (○) Phase 2 (●) Phase 3 (○) Interim (Non-PPAP)

PPAP Submission Warrant

PART INFORMATION

Part Name: Agrafe supp B6,2x12,2 | Cust. Part Number: 3031233810 / FU5T-14E044-LA
Shown on Drawing Number: 30312338 | Organization Part Number: 303 123 381 013
Engineering Change Level: D- | Dated: 22/12/2015
Additional Engineering Changes: n/a | Dated: n/a
Safety and/or Government Regulation: (○) Yes (●) No | Purchase Order No.: 1500001381 | Weight (kg): 0,0078
Checking Aid Number: n/a | Checking Aid Engineering Change Level: n/a | Dated: n/a

ORGANIZATION MANUFACTURING INFORMATION

pb elektro vertriebs-gmbh
Organization Name and Supplier/vendor Code
Robert-Bosch-Strasse 16
Street Address
Groß-Umstadt | HE | 64823 | Germany
City | Region | Postal code | Country

CUSTOMER SUBMITTAL INFORMATION

Nursan Elektrik Donanım A.Ş.
Customer Name/Division
Gulcin Akbas
Buyer/Buyer Code
Ford Transit
Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? (●) Yes (○) No
Submitted by IMDS or other customer format: IMDS
If submitted by IMDS, enter Module ID number, version and date transmitted: ID: 767346959
Are polymeric parts identified with appropriate ISO marking codes? (○) Yes (●) No (○) n/a

REASON FOR SUBMISSION (Check at least one)

- [x] Initial submission
- [ ] Engineering Change(s)
- [ ] Tooling: Transfer, Replacement, Refurbishment, or additional
- [ ] Correction of Discrepancy
- [ ] Tooling Inactive > than 1 year
- [ ] Change to Optional Construction or Material
- [ ] Supplier or Material Source Change
- [ ] Change in Part Processing
- [ ] Parts produced at Additional Location
- [x] Other - please specify below: distribution channel ITW / pb

REQUESTED SUBMISSION LEVEL (Check one)

(●) Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
(○) Level 2 - Warrant with product samples and limited supporting data submitted to customer.
(○) Level 3 - Warrant with product samples and complete supporting data submitted to customer.
(○) Level 4 - Warrant and other requirements as defined by customer.
(○) Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for [x] dimensional measurements, [x] material and functional tests, [ ] appearance criteria, [ ] statistical process package
These results meet all design requirements [x] Yes [ ] No. (If "No" - Explanation Required).
Mold / Cavity / Production Process(es): 1 / 32 / Plastic injection

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts which were made by a process which meets all Production Part Approval Process Manual 4th Edition requirements. I further affirm that these samples were produced at the production rate of __70800___ / _____ 8 _____ production streams. I also certify that documented evidence of such compliance is on file and is available for review. I have noted any exceptions from this declaration below.

EXPLANATION/COMMENTS: pb report QE-18-1285 based on manufacturer's report by ITW
Basis for manufacturing are OEM / manufacturers spec. only. Carry-over part. RoHS/ELV/REACh compliant.

Organization Authorized Signature: b.o. I. Welpe | Print Name: Welpe, Monika | Date: 19/09/2018
Title: QA Assistance | Phone No.: 0049 6078 7809 0 | Fax: 0049 6078 74447
Is each Customer Tool properly tagged and numbered? (○) Yes (○) No (●) n/a | Email: info@pb-fastener.de

FOR OEM/CUSTOMER USE ONLY

Phased PPAP Warrant Status: (○) Approved (○) Rejected (○) Interim Accepted

STA Signature		Name	
		e-mail	
Date			
P.D. Signature /b		Name	
		e-mail	
Date			

a/ Non-PPAP indicates the part does not satisfy one or more PPAP requirements and is incomplete
b/ P.D. signature for Priority suppliers on GPDS programs

Interim Status
(to be completed by the Organization)

Engineering Authorization: _____ Alert, Temp. PCM, TPD Number

Description: (Incomplete PPAP Requirements)

Customer Tracking Number (optional)

DaimlerChrysler Ford GM

Production Part Approval
Dimensional Test Results

ORGANIZATION:
SUPPLIER/VENDOR COD
INSPECTION FACILITY:

PART NUMBER: **ITW : 303123**
PART NAME: **Agrafe supp B6,2x12,2**
DESIGN RECORDED CHANGE LEVEL:
ENGINEERING CHANGE DOCUMENTS:

ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	TEST DATE	QTY. TESTE	ORGANIZATION MEASUREMENT RESULTS (DATA) Mini	Maxi	OK	NOT OK
1	41	± 0,5	19/07/17	3 parts/ cav	41,00	41,21	x	
2	// 3 A		19/07/17	3 parts/ cav	0,16	0,40	x	
3	9,3	± 0,5	19/07/17	3 parts/ cav	9,32	9,37	x	
4	13,2	± 0,4	19/07/17	3 parts/ cav	13,06	13,23	x	
5	7,2	± 0,4	19/07/17	3 parts/ cav	7,40	7,49	x	
6	5,9	± 0,17	19/07/17	3 parts/ cav	5,80	5,94	x	
7	6	± 0,3	19/07/17	3 parts/ cav	5,99	6,03	x	
8	8	± 0,2	19/07/17	3 parts/ cav	7,98	8,08	x	
9	1,55	maxi	19/07/17	3 parts/ cav	1,50	1,53	x	

Signature	Title	Date
Ozlem GONC	QA Engineer	17/04/218

DaimlerChrysler Ford GM

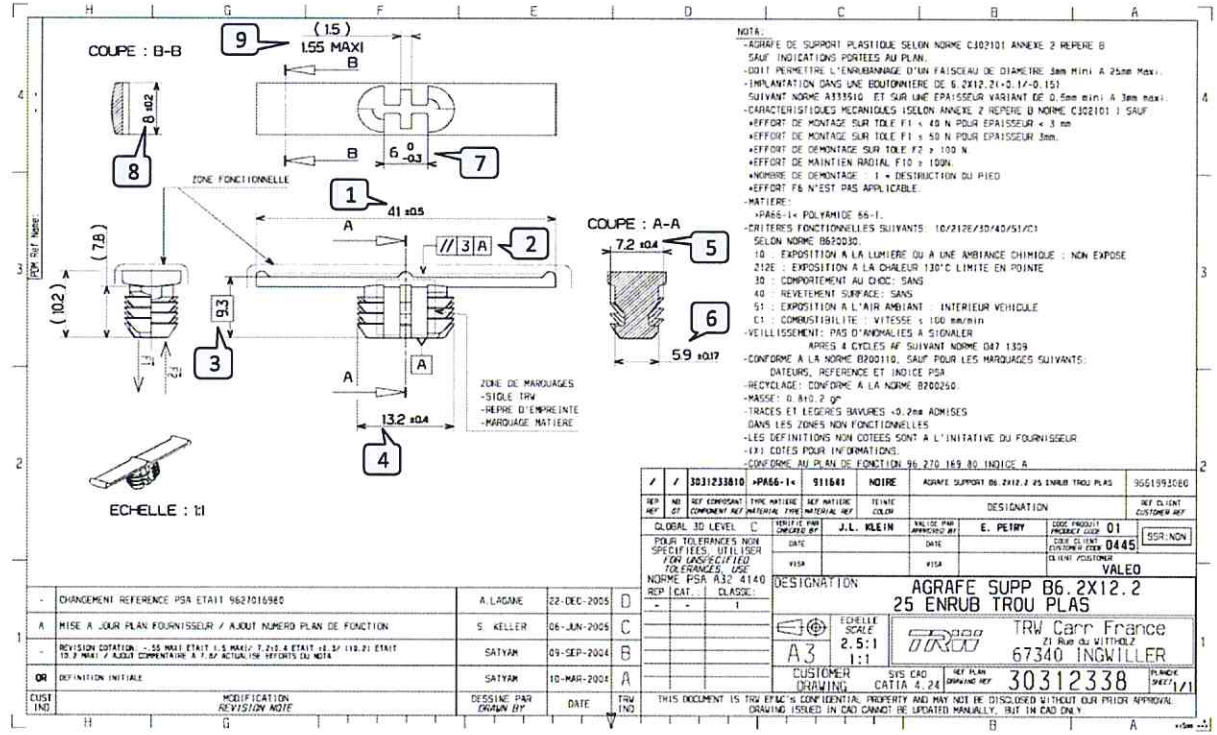
Production Part Approval
Performance Test Results

ORGANIZATION:	PART NUMBER: **ITW : 303123**
SUPPLIER/VENDOR CODE:	PART NAME: **Agrafe supp B6,2x12,2**
MATERIAL SUPPLIER:	DESIGN RECORDED CHANGE LEVEL:
* CUSTOMER SPECIFIED SUPPLIER/VENDOR CODE:	ENGINEERING CHANGE DOCUMENTS:
* If source approval is req'd, include the Supplier (Source) & Customer assigned code.	

TEST SPECIFICATION / REV / DATE	SPECIFICATION / LIMITS	TEST DATE	QTY. TESTED	SUPPLIER TEST RESULTS (DATA) / TEST CONDITIONS		OK	NOT OK
				Mini	Maxi		
Pull in force on panel 12,2x6,0 mm tk 1,2 mm		**19/07/17**	**3 parts/ cav**	2,1 daN	3,0 daN	x	
F ≤ 4 daN							
Pull in force on panel 12,2x6,0 mm tk 3,0 mm		**19/07/17**	**3 parts/ cav**	4,2 daN	4,8 daN	x	
F ≤ 5 daN							
Pull-out force from panel 12,2x6,0 mm tk 1,2 mm		**19/07/17**	**3 parts/ cav**	25,3 daN	35,2 daN	x	
F ≥ 10 daN							
Pull-out force from panel 12,2x6,0 mm tk 3 mm		**19/07/17**	**3 parts/ cav**	15,9 daN	18,9 daN	x	
F ≥ 10 daN							

Blanket statements of conformance are unacceptable for any test results.

Signature	Title	Date
Ozlem GONC	QA Engineer	17/04/2018



NOTA:
-AGRAFE DE SUPPORT PLASTIQUE SELON NORME C302101 ANNEXE 2 REPERE B
SAUF INDICATIONS PORTEES AU PLAN.
-DOIT PERMETTRE L'ENRUBANNAGE D'UN FAISCEAU DE DIAMETRE 8mm Mini A 25mm Maxi.
-IMPLANTATION DANS UNE BOUTONNIERE DE 6.2X12.2(+0.1/-0.15)
SUIVANT NORME A133510 ET SUR UNE EPAISSEUR VARIANT DE 0.5mm mini A 3mm maxi.
-CARACTERISTIQUES MECANIQUES (SELON ANNEXE 2 REPERE B NORME C302101) SAUF
*EFFORT DE MONTAGE SUR TOLE F1 ≤ 40 N POUR EPAISSEUR < 3 mm
*EFFORT DE MONTAGE SUR TOLE F1 ≤ 50 N POUR EPAISSEUR 3mm.
*EFFORT DE DEMONTAGE SUR TOLE F2 ≥ 100 N.
*EFFORT DE MAINTIEN RADIAL F10 ≥ 100N.
*NOMBRE DE DEMONTAGE : 1 = DESTRUCTION DU PIED
*EFFORT F6 N'EST PAS APPLICABLE.
-MATIERE:
*PA66-I< POLYAMIDE 66-I.
-CRITERES FONCTIONNELLES SUIVANTS: 10/212E/30/40/51/C1
SELON NORME B620030.
10 : EXPOSITION A LA LUMIERE OU A UNE AMBIANCE CHIMIQUE : NON EXPOSE
212E : EXPOSITION A LA CHALEUR 130°C LIMITE EN POINTE
30 : COMPORTEMENT AU CHOC: SANS
40 : REVETEMENT SURFACE: SANS
51 : EXPOSITION A L'AIR AMBIANT : INTERIEUR VEHICULE
C1 : COMBUSTIBILITE : VITESSE ≤ 100 mm/min
-VEILLISSEMENT: PAS D'ANOMALIES A SIGNALER
APRES 4 CYCLES AF SUIVANT NORME D47 1309
-CONFORME A LA NORME B200110, SAUF POUR LES MARQUAGES SUIVANTS:
DATEURS, REFERENCE ET INDICE PSA
-RECYCLAGE: CONFORME A LA NORME B200250.
-MASSE: 0.8±0.2 gr.
-TRACES ET LEGERES BAVURES <0.2mm ADMISES
DANS LES ZONES NON FONCTIONNELLES.
-LES DEFINITIONS NON COTEES SONT A L'INITATIVE DU FOURNISSEUR
-(X) COTES POUR INFORMATIONS.
-CONFORME AU PLAN DE FONCTION 96 270 169 80 INDICE A

REP REF	NO OT	REF COMPOSANT COMPONENT REF	TYPE MATIERE MATERIAL TYPE	REF MATIERE MATERIAL REF	TEINTE COLOR	DESIGNATION	REF CLIENT CUSTOMER REF
/	/	3031233810	>PA66-I<	911681	NOIRE	AGRAFE SUPPORT B6.2X12.2 25 ENRUB TROU PLAS	9661993080

GLOBAL 3D LEVEL C

	VERIFIE PAR CHECKED BY	VALIDE PAR APPROVED BY	CODE PRODUIT PRODUCT CODE 01
DATE	J.L. KLEIN	E. PETRY	CODE CLIENT CUSTOMER CODE 0445 SSR:NON
VISA			CLIENT /CUSTOMER VALEO

POUR TOLERANCES NON SPECIFIEES, UTILISER / FOR UNSPECIFIED TOLERANCES, USE NORME PSA A32 4140

REP	CAT.	CLASSE:
-	-	1

-	CHANGEMENT REFERENCE PSA ETAIT 9627016980	A.LAGANE	22-DEC-2005	D
A	MISE A JOUR PLAN FOURNISSEUR / AJOUT NUMERO PLAN DE FONCTION	S. KELLER	06-JUN-2005	C
-	REVISION COTATION : -.55 MAXI ETAIT 1.5 MAXI/ 7.2±0.4 ETAIT ±0.3/ 13.2 MAXI / AJOUT COMMENTAIRE A 7.6/ ACTUALISE REPORTS DU NOTA	SATYAM	09-SEP-2004	B
OR	DEFINITION INITIALE	SATYAM	10-MAR-2004	A
CUST IND.	MODIFICATION / REVISION NOTE	DESSINE PAR / DRAWN BY	DATE	TRW IND.

DESIGNATION: AGRAFE SUPP B6.2X12.2 25 ENRUB TROU PLAS

ECHELLE / SCALE A3 2.5:1 1:1

TRW Carr France
Z1 Rue du VITTHOLZ
67340 INGWILLER

CUSTOMER DRAWING — SYS CAO CATIA 4.24 — REF PLAN / DRAWING REF 30312338 — PLANCHE / SHEET 1/1

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DESIGNATION TEMPORAIRE, UTILISER FILEPSA

N° PLAN 9661993080 INDICE OR PLANCHE CLICHE ECHELLE 1:1

AUTOMOBILES PEUGEOT AUTOMOBILES CITROEN — 1er DIEDRE — FORMAT A2

Celanese
So.F.TeR.

SO.F.TER. SPA
sede legale, stabilimento di Forlì
via Mastro Giorgio 1
47122 Forlì Italy
tel +39 0543 790 411
fax +39 0543 473 119
softer@softerspa.com

stabilimento di Ferrara
via Marconi 73
44122 Ferrara Italy
tel +39 0532 2285 0011
fax +39 0532 2285 0041
www.softergroup.com

P.IVA/VAT Nr IT 02019080403
C.F./R.I. 09211800157
R.E.A. FC n. 233925
Cap. Soc. € 10.000.000 i.v.
Socio Unico Celanese
Sales Italy S.r.l.

NYLFOR®
A1 E6/2D H2 NERO Y1

Prove di autoestinguenza
Flammability test

Metodo test Test method	**Valore richiesto** Requested value	**Risultati** Results
FMVSS 302	**Velocità di combustione** Burning rate: < 100 mm/min	PASS(*)

*Note(*): tested on (100*300*4)mm injected plates*

*** I dati riportati sono i risultati di prove eseguite in laboratorio. Sono riportati a titolo indicativo e devono essere considerati come valori medi, forniti senza alcuna responsabilità da parte nostra.**
* The data of this bulletin are the result of laboratory tests and being average values are provided only for general guidance. So.F.Ter. accepts no liability for the results obtained therefrom.

rev. 2.0 **June 2017**

Celanese
So.F.TeR.

SO.F.TER. SPA
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Cap. Soc. € 10.000.000 i.v.
Socio Unico Celanese
Sales Italy S.r.l.

Forlì, 14/07/2017

Subject: NYLFOR® - Candidate List - SVHC

Dear Customer,
based on information received from our suppliers of raw materials, So.F.Ter. Spa informs you that the following family of products:

NYLFOR®

does not contain substances that are currently included in the candidate list above the threshold of 0.1% (w / w). You can check the updated list of SVHCs at the following address:
(http://echa.europa.eu/web/guest/candidate-list-table)

Please note that the use of these substances is not prohibited, but the inclusion in the Candidate List indicates that their use may be subject to authorization by ECHA, as required by Article 59 (1 -10) of the European Regulation N° 1907/2006 (REACH).

This statement is based on the current state of our knowledge and experiences and it refers only to the product supplied from our factory in its form and in its original package.

Do not hesitate to contact us in case you need further information.
Kind regards,

SO.F.TER. SPA
Dr. Michele Pontevivo
michele.pontevivo@softerspa.com
tel +39 0543 790411

CERTIFICATE

This is to certify that

ITW EF&C France SAS

4 rue du Wittholz
67340 Ingwiller
France

has implemented and maintains a **Quality Management System**.

Scope:
Design and manufacturing of plastic technical parts

An audit, conducted and documented in a report, has verified that this quality management system fulfills the requirements of the following ISO Technical Specification:

ISO/TS 16949:2009

(with product design)

Certificate registration no.	304897 TS09
Issuing date	2017-07-24
This certificate is valid until	2018-09-14
IATF No.	0270089

2-IAO-QMC-01001

For and on behalf of DQS

Frank Graichen
Managing Director, DQS GmbH

Michael Drechsel
Managing Director, DQS Holding GmbH

Annex to certificate registration no.: 304897 TS09
IATF-No.: 0270089

ITW EF&C France SAS

4 rue du Wittholz
67340 Ingwiller
France

2-IAO-QMC-01001

Remote Location	Scope
500344 **ITW Fasteners Products GmbH** **Am Pulverhäuschen 7** **67677 Enkenbach-Alsenborn** **Germany**	Information Technology, Purchasing, Sales, Strategic planning

This annex (edition: 2017-07-24) is only valid in connection with the above-mentioned certificate.

2017-04-10

CERTIFICATE

This is to certify that

ITW EF&C France SAS

4 rue du Wittholz
67340 Ingwiller
France

has implemented and maintains an **Environmental Management System**.

Scope:
Production of technical parts, plastic fastener systems by injection for the automotive industry

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 14001 : 2015

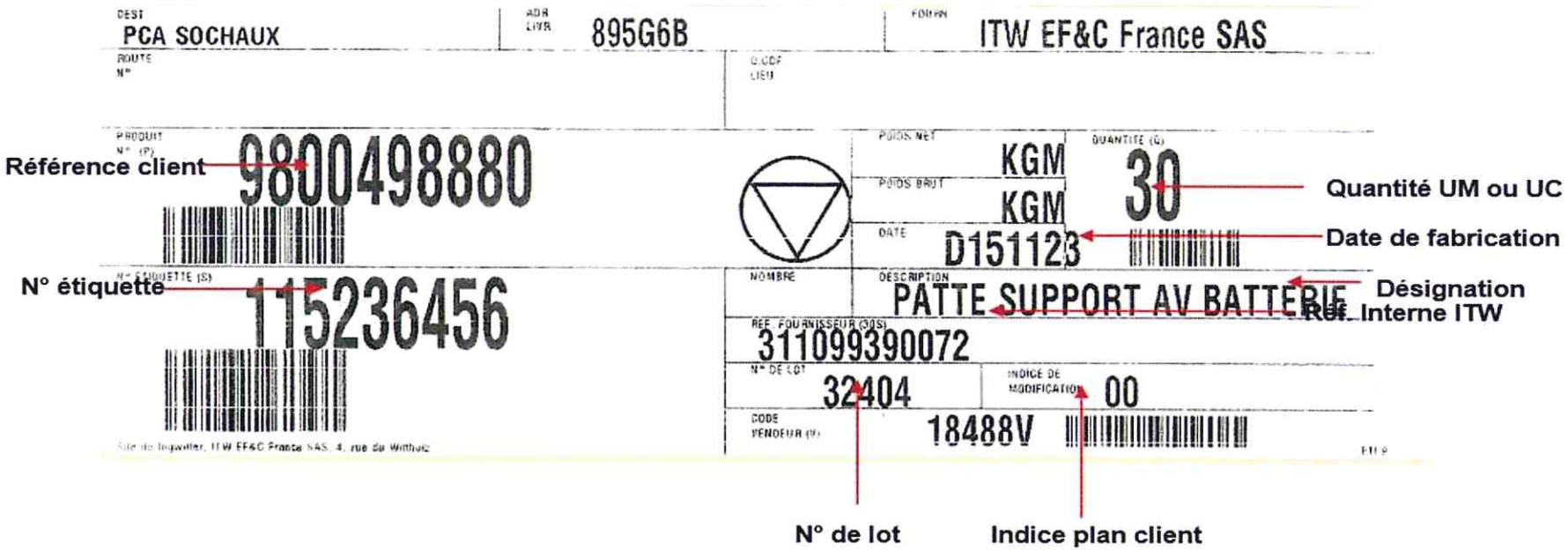
Certificate registration no.	304897 UM15
Valid from	2017-07-07
Valid until	2020-07-06
Date of certification	2017-07-07

DAkkS
Deutsche
Akkreditierungsstelle
D-ZM-16074-01-00

DQS GmbH

Frank Graichen
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany


DEST
PCA SOCHAUX
ADR LIVR
895G6B
FOURN
ITW EF&C France SAS
ROUTE N°
QUAI LIEU
PRODUIT N° (P)
9800498880
POIDS NET
KGM
QUANTITE (Q)
30
POIDS BRUT
KGM
DATE
D151123
N° ETIQUETTE (S)
115236456
NOMBRE
DESCRIPTION
PATTE SUPPORT AV BATTERIE
REF. FOURNISSEUR (30S)
311099390072
N° DE LOT
32404
INDICE DE MODIFICATION
00
CODE PEINEUR (V)
18488V
Référence client
N° étiquette
Quantité UM ou UC
Date de fabrication
Désignation
Ref. Interne ITW
N° de lot
Indice plan client

ITW Automotive

Engineered Fasteners & Components

ITW EF&C France SAS

Zone Industrielle

67340 INGWILLER

Tél. 03.88.89.47.54

Fax : 03.88.89.66.67

GENERIC FILE
N° DG 001

DATE	LEVEL	MODIFICATION / EVOLUTION	COMMENTS
05/02/1997	1	Creation	
31/05/1999	2	Control plan update -Product Family (F14 and F21) - list of procedures-instructions-document	
23/11/1999	3	Control plan update	
20/12/1999	4	Addition Safety & regulation symbol on control plan	
26/02/2001	5	Control plan update	
17/01/2002	6	Annex documentation update	
27/08/2003	7	Annex documentation update	
06/11/2003	8	additionnal family product F15 et F24. Procedure number update	
02/11/2005	9	Adding raw material moisture rate control + gage device control	
11/09/2006	10	additionnal family product F25 gage device control during assembly process update	
02/06/2008	11	Complet review	
24/06/2008	12	Weighting machine control adding (Tare at production start + check during LPA)	
15/09/2008	13	Complet review (raw material control according control plan, Automatic machine's parameter checking)	
09/07/2009	14	DQS Audit : adding product audit in control plan	
11/12/2013	15	Update according internal audit	
05/05/2014	16	Poka-Yoke integration	
26/09/2016	17	New logo	

Checked, and approved by E. PALFRAY Visa :

ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	Date : 26/09/16
		Level : 17
SUMMARY		Page : 1/1
Checked, and approved by E. PALFRAY		

B

B.L. : Delivery Note

D

D.S. : Start or production

M

Training manuel : Training manuel for worker in production

N

N.C. : Non Conform

O

O.F. : Production order

P

P.L.A. : Plant Layered Audits

Q

QSYS : Quality software

X

XPPS : Production management software

PROCEDURE

PB 20 : Traitement des non conformités
PE 10 : Traitement de la commande client
PE 20 : Planification et ordonnancement de production
PE 30 : Gestion des approvisionnements
PE 40 : Réception
PE 50 : Fabrication
PE 60 : Expédition
PE 70 : Identification et traçabilité
PE 80 : Maintenance
PE 90 : Gestion des ECME
PE 100 : Gestions des fins de série
PE 110 : Traitement des non-conformités en réception
PE 120 : Traitement des non-conformité en production ou suite à un audit
PE 130 : Gestion de la maintenance moule
PG 20 : Gestion des audits
PG 40 : Gestion de la documentation
PG 60 : Définition et suivi des actions correctives

INSTRUCTIONS

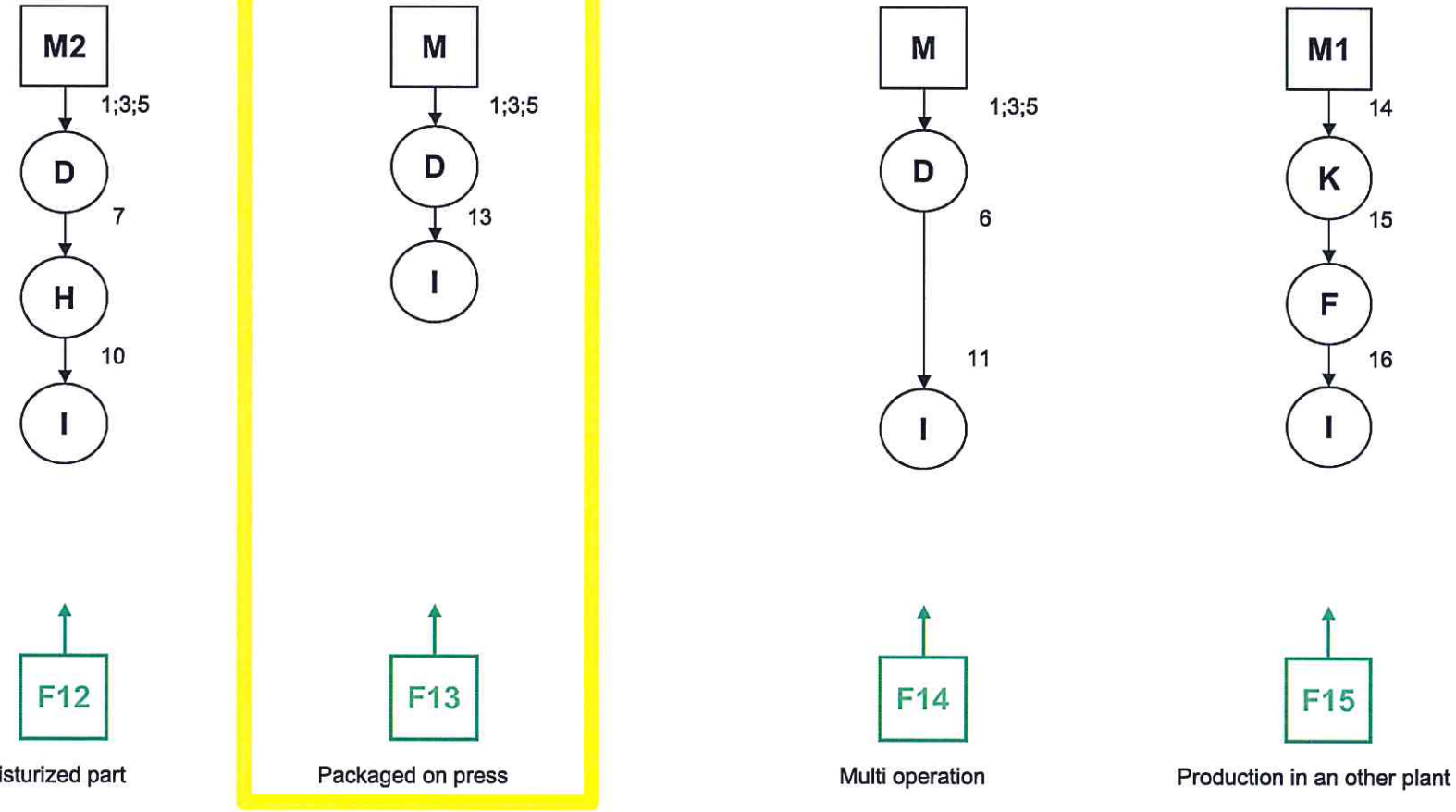
Manuel de formation.
IP 055 : Règles impératives à l'atelier
IP 024 : Utilisation des imprimantes code à barre stipe 500
IP 034 : Alimentation centralisée
IP 052 : Température d étuvage
IP 059 : Gestion des lots non conformes

DOCUMENTS

DM 005	Fiche de réglage
DM 017	Fiche de suivi moule
DQ 006	Rapport de contrôle
DQ 115	Annexe au plan de contrôle
DP 013	Lot non conforme
DP 091	Document d'enregistrement Poka Yoke pour la production

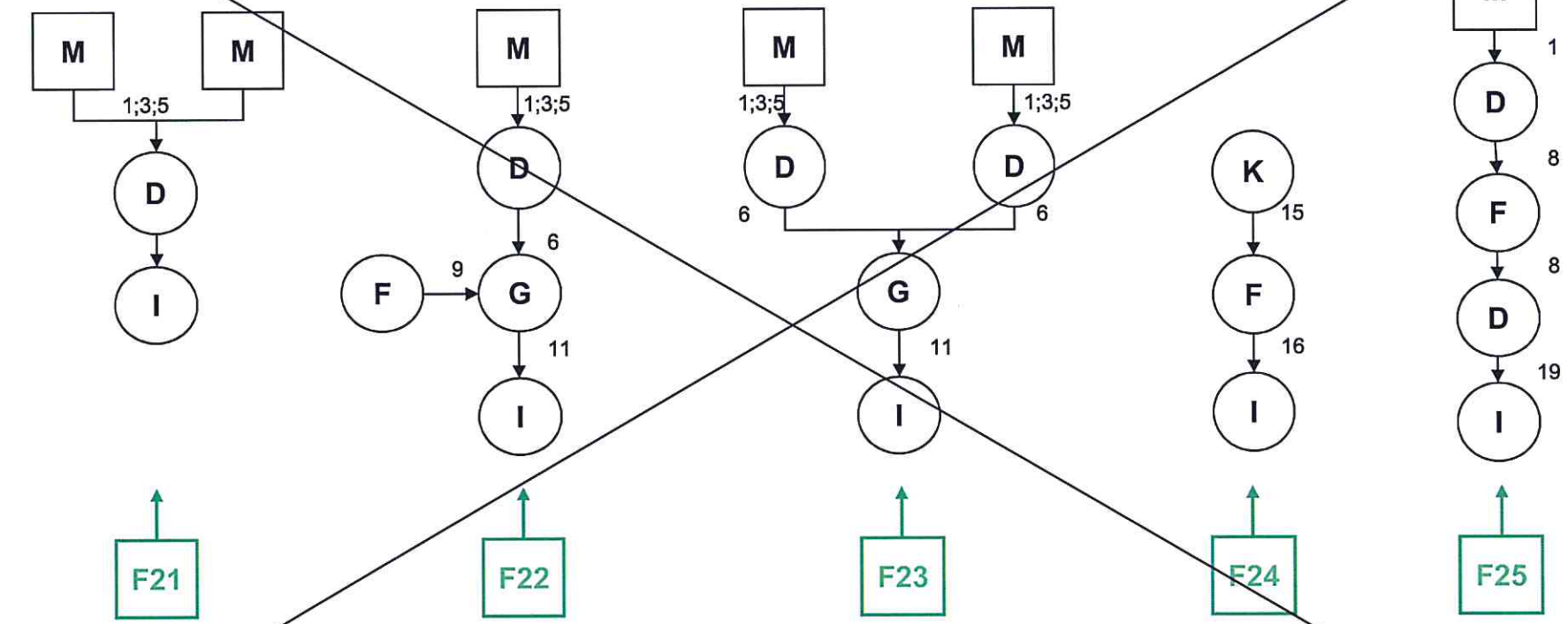
ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	Date : 26/09/16 Level : 17
PRODUCT FAMILY		Page : 1/4
Checked, and approved by E. PALFRAY		

MONO - COMPONENT PART F1



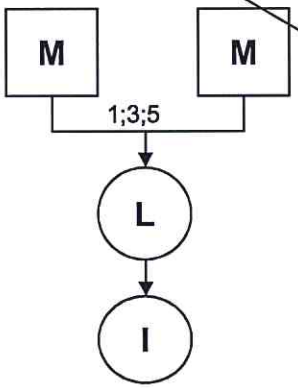
MULTI COMPONENT PART

F2



MULTI-COMPONENT PART WITH MISTAKE PROFING

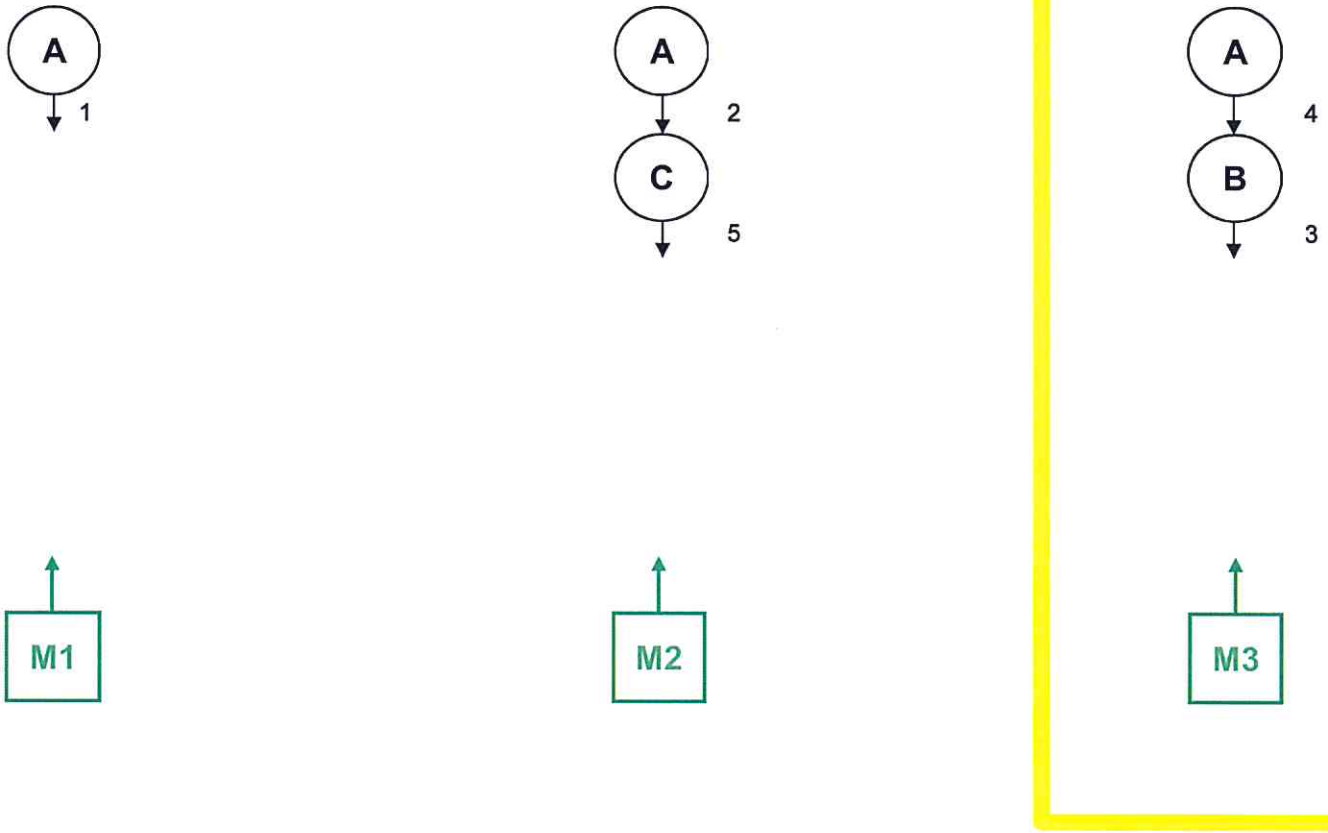
F3



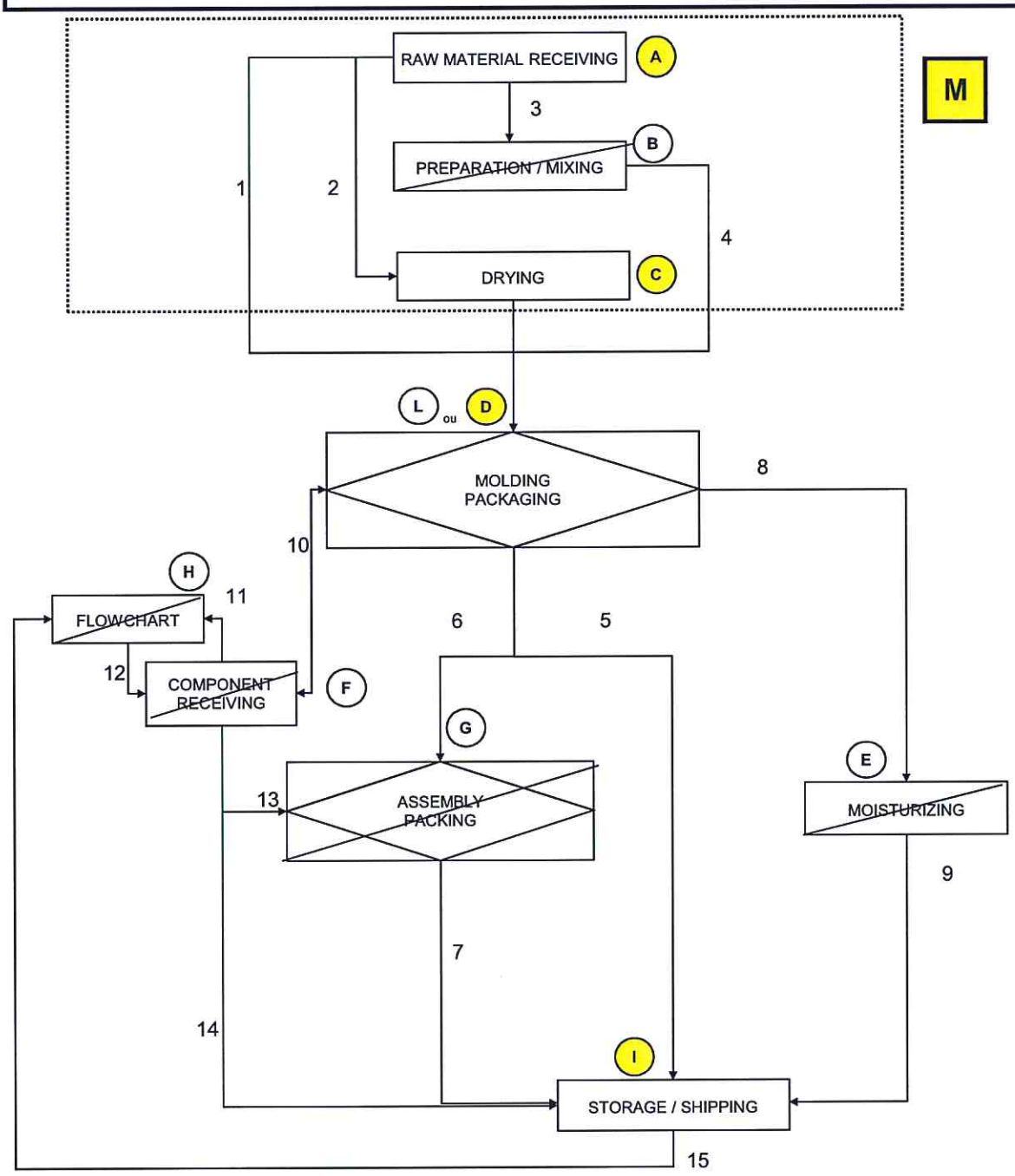
Bi-material with mistake profing

MATERIAL PROVISION

M



ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	Date : 26/09/16 Level : 17
MANUFACTURE AND CONTROL FLOWCHART PER OPERATION		Page : 1/10
Checked, and approved by E. PALFRAY		



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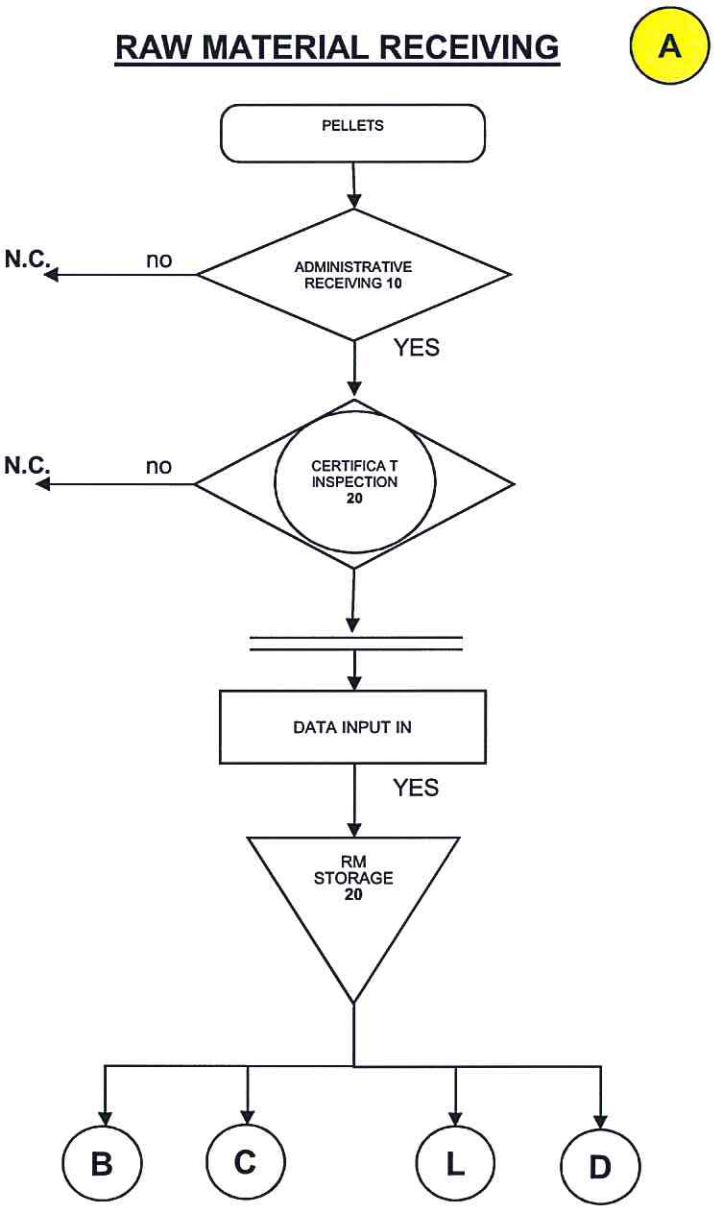
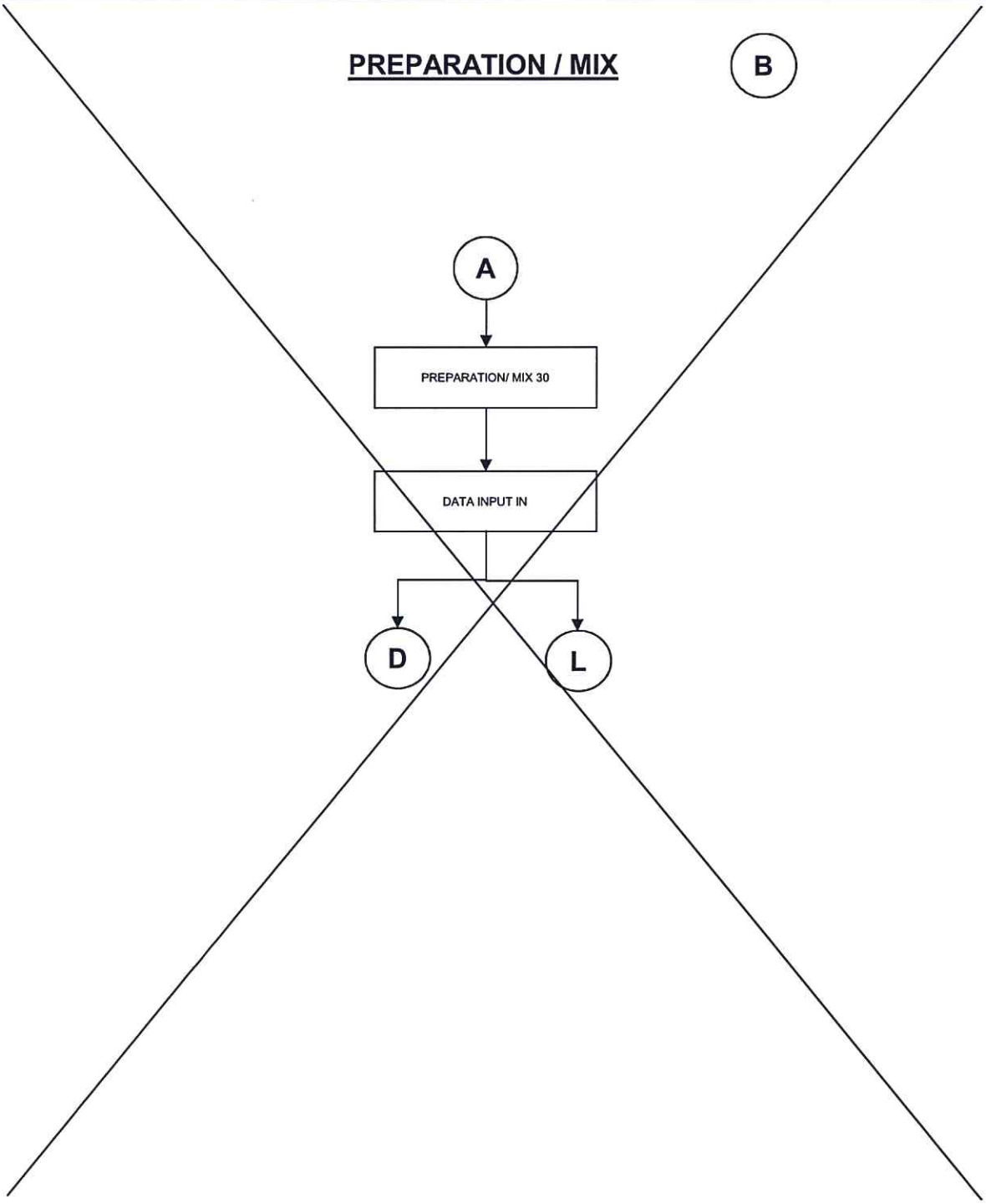
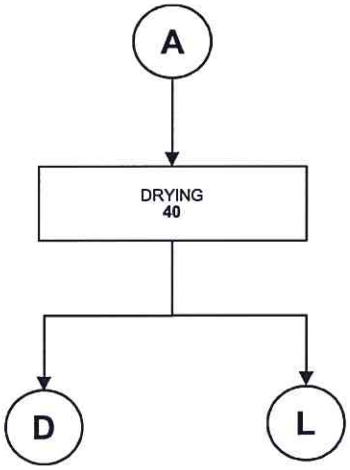


PREPARATION / MIX



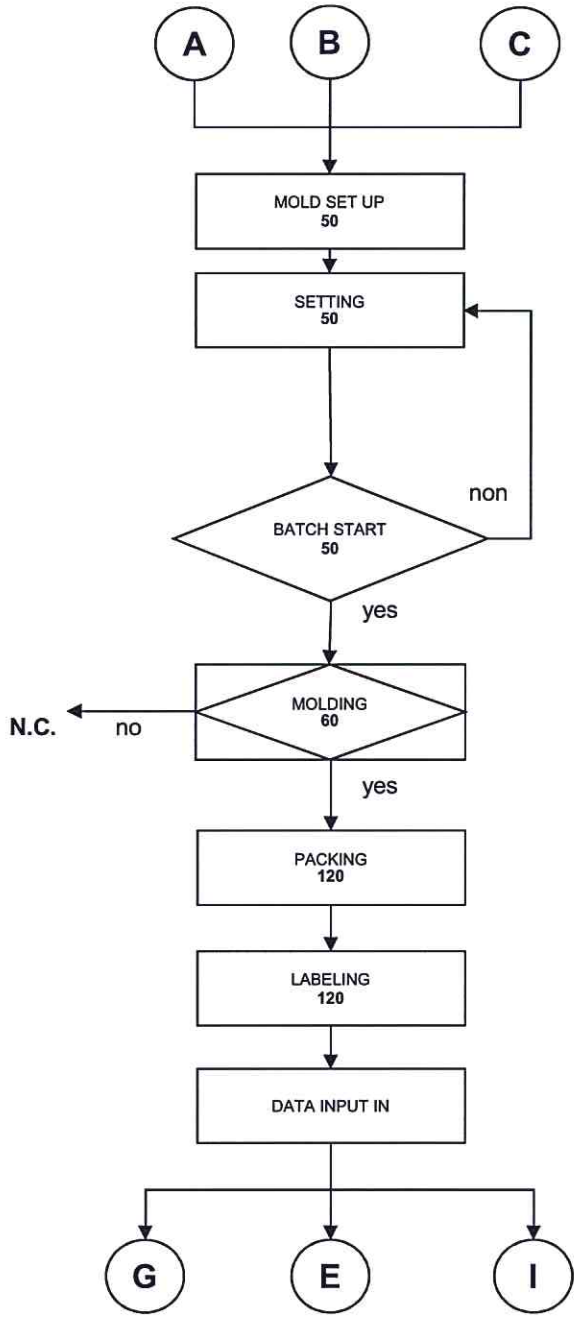
DRYING

C

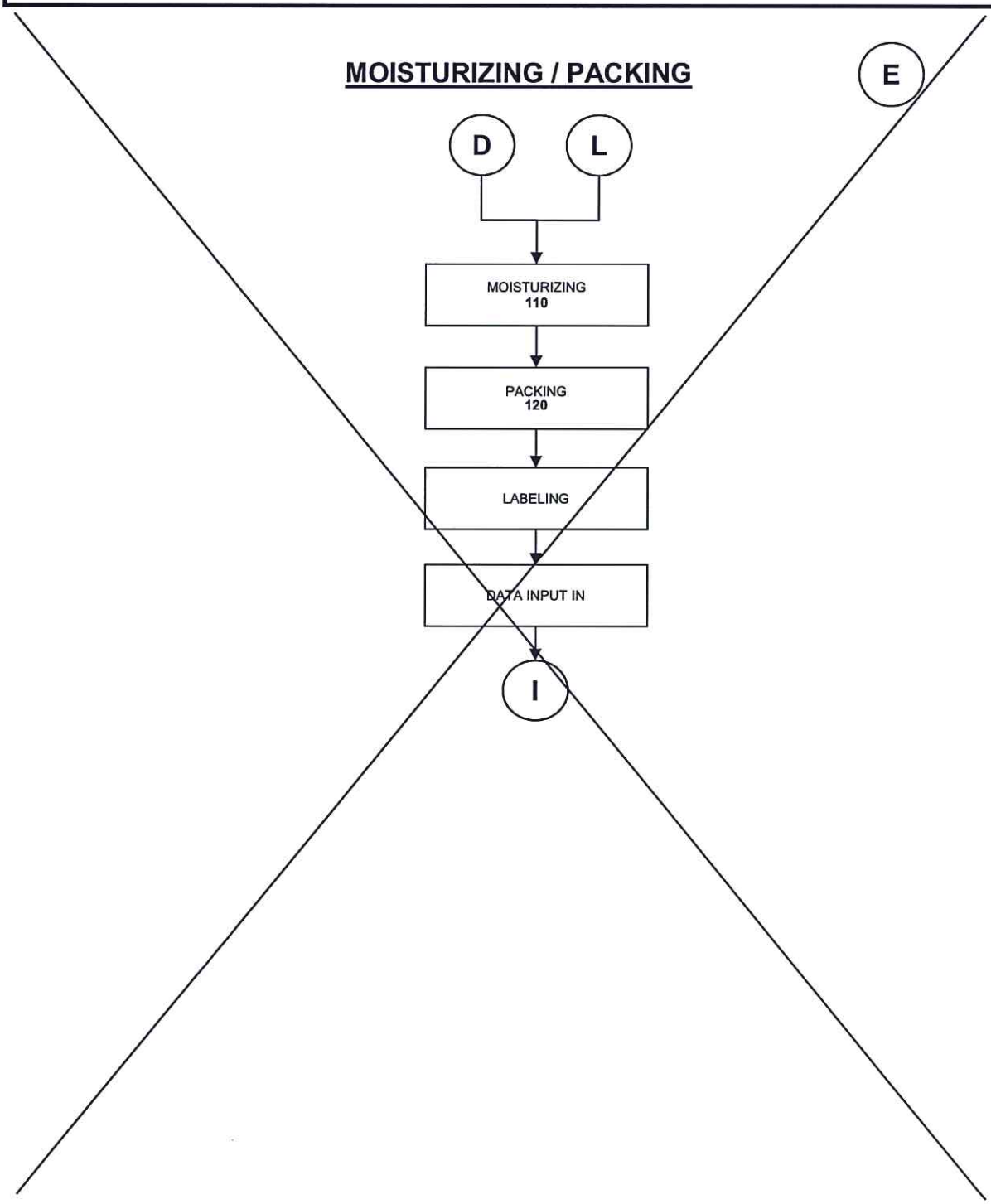


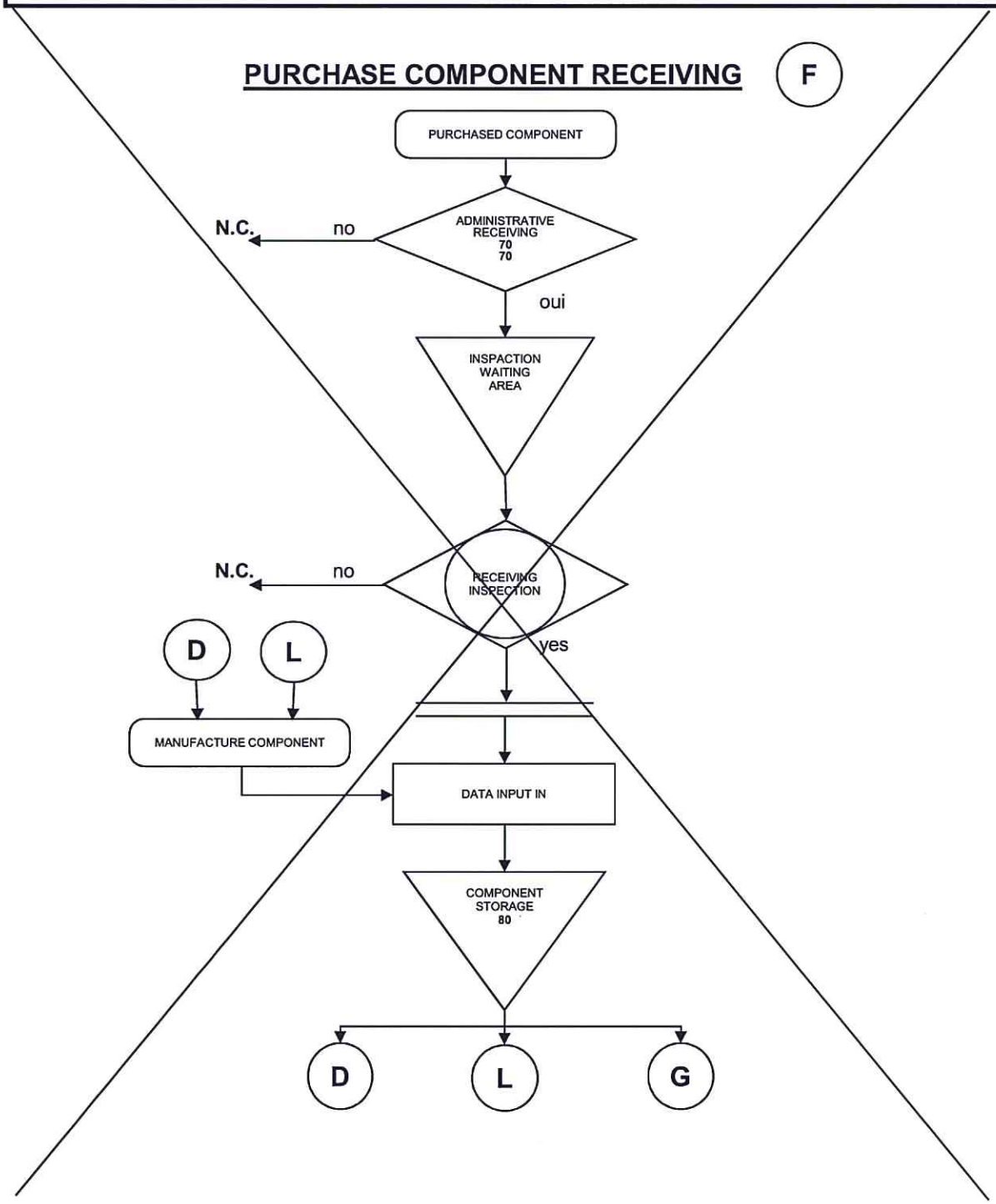
MOLDING / PACKING

D

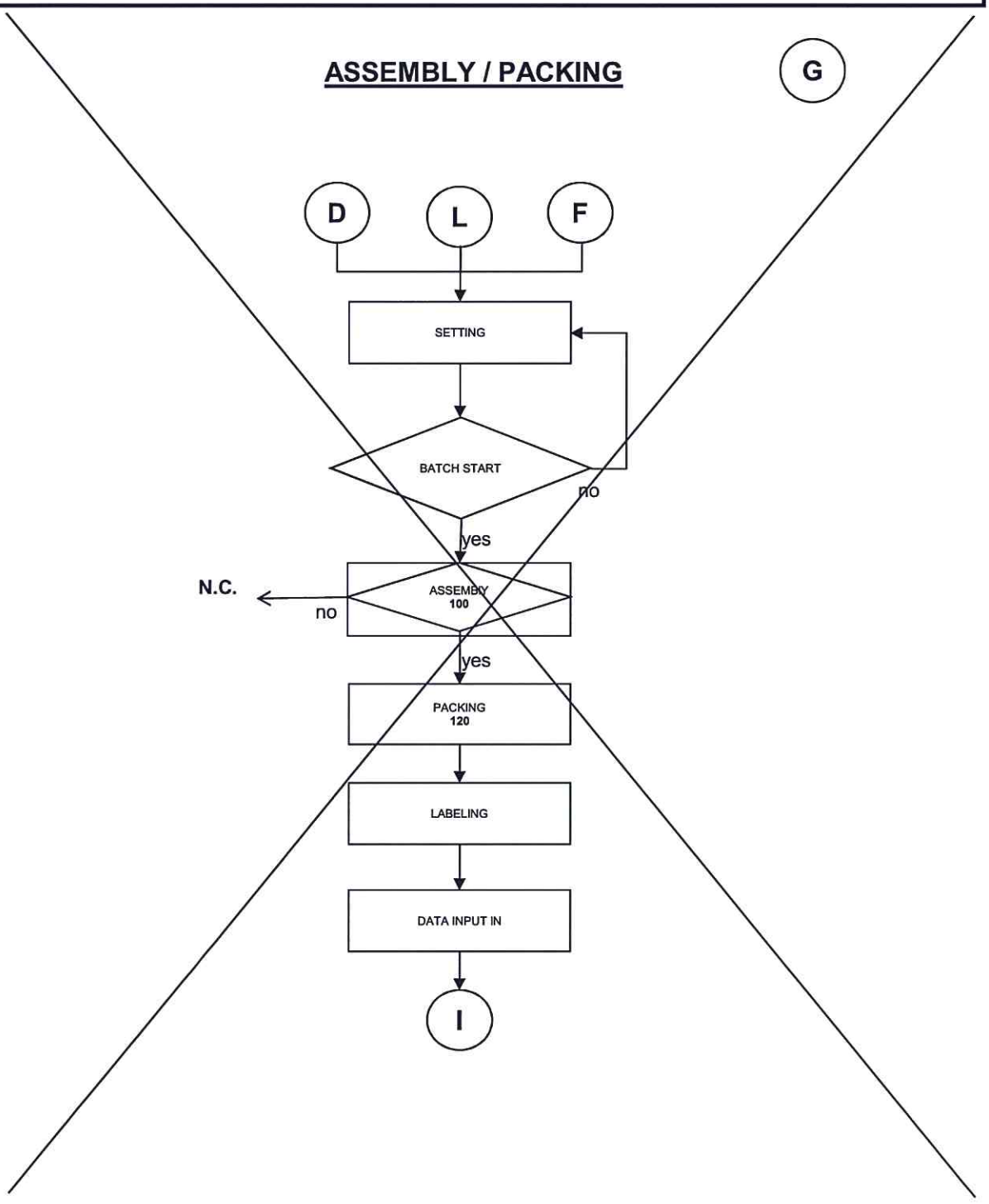


MOISTURIZING / PACKING



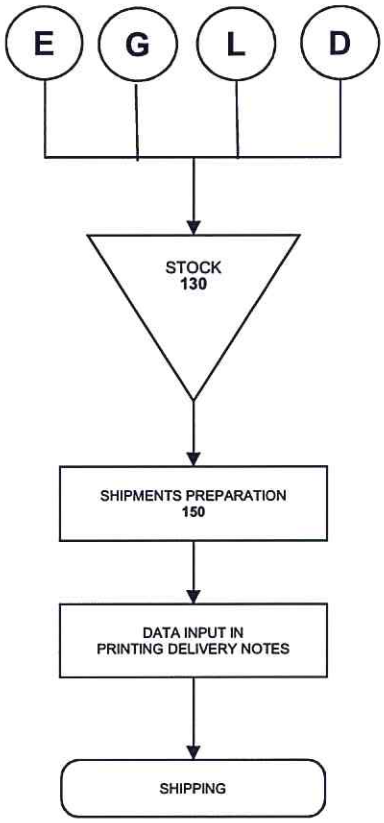

PURCHASE COMPONENT RECEIVING
F
PURCHASED COMPONENT
ADMINISTRATIVE RECEIVING 70 70
N.C.
no
oui
INSPACTION WAITING AREA
RECEIVING INSPECTION
N.C.
no
yes
D
L
MANUFACTURE COMPONENT
DATA INPUT IN
COMPONENT STORAGE 80
D
L
G

ASSEMBLY / PACKING



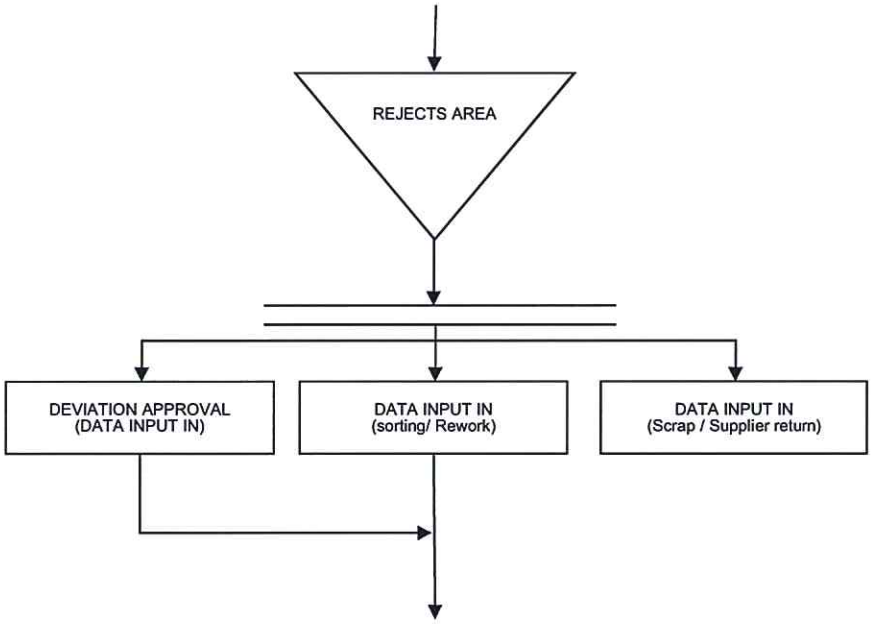
STORAGE / SHIPPING

I



NON CONFORMITIES DISPOSITION

NC



ITW Automotive
Engineered Fasteners & Components

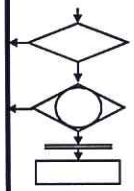
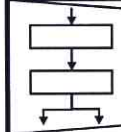
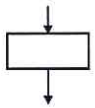
GENERIC FILE N° DG 001

R

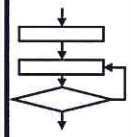
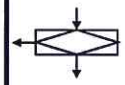
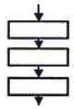
Date : 26/09/16
Level : 17
Page : 1/8

PROTOTYPE | PRE-PROD. | PRODUCTION | CONTROL PLAN

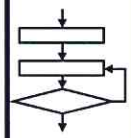
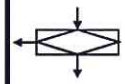
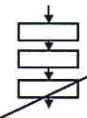
Checked, and approved by E. PALFRAY

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level			counter-measures to product or process defect	filing mode and duration
											1	2	3		
	Pellets	A	10 Administrative receiving	Conformity: - order - reference number - delivery note				Data, Processing lock XPPS	Commande PE 40	Recording XPPS	1x receiving			PE110	PG40
			20 Incoming inspection	Conformity : - certificate of compliance				Data, Processing lock XPPS	Certificate of compliance				1 x batch	PE110	PG40
	Pellets		20 Raw material Storage			Cart Fork lift									
	Pellets	B	30 ~~Supply / mix~~	Material prepared according to shop floor order		Central feeding			Shop floor order PE40	Recording XPPS	1x /~~shop floor~~ order or more if needed				
	Pellets	C	40 Drying	Material prepared according to shop floor order		Central feeding coupled with dryer			Shop floor order IP034 IP052						

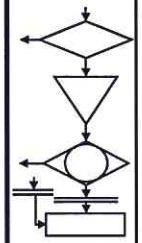
ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	R	Date : 26/09/16
			Level : 17
PROTOTYPE / PRE-PROD. / PRODUCTION	CONTROL PLAN		Page : 2/8
Checked, and approved by E. PALFRAY			

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level 1	2	3	counter-measures to product or process defect	filing mode and duration
	Pellets	D	50 Mold set up	Conformity according to production folder	Work routing	Crane Mold Press	DM017 PE80							PE50	
			50 Setting	Check settings against specifications	According to DM005	Press Mold	PE80		DM005					PE50	
			50 Batch Start	DS control for: - material - visual - dimensional - spec, functional - machine parameters	According to control range + annex DM017	According to specific product control plan	PE90		control plan + annexe DM005	Qsys DM017		1 x D.S. 1 x D.S.		DQ115 PE120 PE50 IP059	PG40
	Pellets		60 Molding Injection	Production Control: - According control plan - injection machine setting automatic) - According production file criticitle	According to control range + annex DM017	Press Mold control plan	PE90 PE80		control plan + annexe DM005	Qsys DM017 Injection machine housing. Automatic control	control plan + annexe	product audit Frequency according to PLA planning		DQ115 PE120 PE50 IP059	PG40
	Component		120 Packing	Quantity	Batch order	Weighing machine (tarage: start of	PE90		Batch order	XPPS + Labelling tare checked by	100%			PE120	
			120 Labeling	labelling conformity	Batch order	Label			IP024	XPPS recording	100%			PE70	PG40

ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	R	Date : 26/09/16
			Level : 17
PROTOTYPE / PRE-PROD. / PRODUCTION	CONTROL PLAN		Page : 3/8
Checked, and approved by E. PALFRAY			

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level 1	2	3	counter-measures to product or process defect	filing mode and duration
	Pellets	L	50 Mold set up	Conformity according to production folder	Work routing	Crane Mold Press	DM017 PE80							PE50	
			50 Setting	Check settings against specifications	According to DM005	Press Mold	PE80		DM005					PE50	
			50 Btach Start + Mistake Proofing	DS control for: - material - visual - dimensional - spec, functional - machine parameters	According to control range + annex DM017	According to specific product control plan	PE90	Mistake-Proofing	control plan + annexe DM005 Production Instruction	Qsys DM017		1 x D.S. 1 x D.S 1 x shift.		DQ115 PE120 PE50 IP059 DP091	PG40
	Pellets		60 Molding Injection	Production Control: - According control plan - injection machine setting automatic) - According production file criticitle	According to control range + annex DM017	Press Mold control plan	PE90 PE80		control plan + annexe DM005	Qsys DM017 Injection machine housing. Automatic control	control plan + annexe	product audit Frequency according to PLA planning		DQ115 PE120 PE50 IP059	PG40
	Component		120 Packing	Quantity	Batch order	Weighing machine (tarage: start of production)	PE90		Batch order	XPPS + Labelling + tare checked by LRA	100%			PE120	
			120 Labeling	labelling conformity	Batch order	Label			IP024	XPPS recording	100%			PE70	PG40

ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	R	Date : 26/09/16
			Level : 17
PROTOTYPE / PRE-PROD. / PRODUCTION	CONTROL PLAN		Page : 4/8
Checked, and approved by E. PALFRAY			

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level 1	2	3	counter-measures to product or process defect	filing mode and duration
	Components	F	70 Administrative receiving	Conformity: - Order - Reference - Delivery note				Data processing lock XPPS	Order	Recording XPPS	1 x receiving			PE110	PG40
			70 Receiving inspection	Conformity : - Visual				Recording XPPS	PE40 (Management AQF)	Recording XPPS			AQF rules	PE110	PG40
	Components		80 Storage			Cart Fork lift truck								PE110	

ITW Automotive
Engineered Fasteners & Components

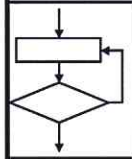
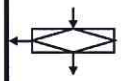
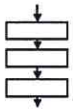
GENERIC FILE N° DG 001

R

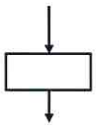
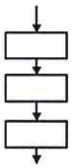
Date : 26/09/16
Level : 17
Page : 5/8

PROTOTYPE | PRE-PROD. | PRODUCTION | CONTROL PLAN

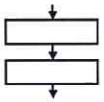
Checked, and approved by E. PALFRAY

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level 1	2	3	counter-measures to product or process defect	filing mode and duration
	Components	G	90 Setting	Setting checked against specifications		Robot Assembly tool	PE80							PE50	
	Components		90 Batch start	Control - Visual	According to control routing	Measure instruments	PE90		Control routing			1 x D.S.		PE50 PE120 IP059	PE40
	Components		100 Assembly	Control - Visual - Dimensional	According to control routing	Robot Assembly tool Gauge	PE90		Control range . Specific instruction as par case		Control routing			PE50 PE120 IP059	PE40
	Components		120 Packing	Quantity	According to work routing	Weighing machine	PE90		Work routing		100%			PE120	
			120 Labeling	Conformity of label	According to work routing	Label			IP024	Recording XPPS	100%				PE40

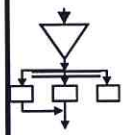
ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001			R	Date : 26/09/16
PROTOTYPE	PRE-PROD.	PRODUCTION	CONTROL PLAN		Level : 17
					Page : 6/8
Checked, and approved by E. PALFRAY					

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level			counter-measures to product or process defect	filing mode and duration
											1	2	3		
	Components	E	110 Moisturizing	Time Température		Moisturizer Timer	Preventive maintenance sheet GMAO		Work routine						
	Components		120 Packing	Quantity	According to work routing	Weighing machine	PE90		Work routine		100%			PE120	
			120 Labelling	Conformity of label	According to work routing	Label			IP024	Recording XPPS	100%				PE40

ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	R	Date : 26/09/16
			Level : 17
PROTOTYPE / PRE-PROD. / PRODUCTION	CONTROL PLAN		Page : 7/8
Checked, and approved by E. PALFRAY			

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level 1	2	3	counter-measures to product or process defect	filing mode and duration
	Finished good	I	130 Storage			Transpalette Chariot élévateur	Vérification périodique								
	Finished good		150 Shipments routing Shipping	- Shipments routing - delivery note -Packing list derived from packing sheet	Packing sheet	Cart Fork lift truck Strapping machine	Recurring checks	Barre code reading device	PE60	Recording XPPS	1 x shipping				PG40

ITW Automotive Engineered Fasteners & Components	GENERIC FILE N° DG 001	R	Date : 26/09/16
			Level : 17
PROTOTYPE / PRE-PROD. / PRODUCTION	CONTROL PLAN		Page : 8/8
Checked, and approved by E. PALFRAY			

flowchart	component	operation reference	Nb / description of operation	process parameters or product specifications	parameters value / specifications	production or control mean	maintenance	lock	reference document	process/ product follow up. Data recording	type of surveillance per level			counter-measures to product or process defect	filing mode and duration
											1	2	3		
	Pellets Components Finish goods rejected	NC	Concession acceptance Sorting rework Return to supplier Scrap	Depending on refusal grounds		Measure Laboratory Specific tool	PE90		IP059 DP013	Recording XPPS	100%	1 x NC		PE 110 PE120	PG40

ITW Automotive
Engineered Fasteners & Components

Gauge R&R

Gauge name	Digital caliper C84	Part No.	303123 clip 6.5x12.5			
Specs	Dimension: 8 ± 0,2mm	Interval of tolerance	0,4	Max :	8,2	Min : 7,8

Dispersion measure (number of sigma) **5,15** Date: 30/11/17

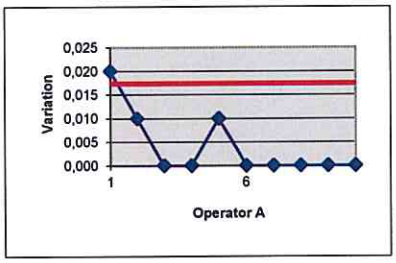
	Operator A				Operator B				Operator C				Moy p
Sample N°	Trial 1	Trial 2	Trial 3	range	Trial 1	Trial 2	Trial 3	range	Trial 1	Trial 2	Trial 3	range	
1	8,01	7,99		0,02	8,02	8,01		0,01	8,01	8,01		0,00	8,01
2	8,00	8,01		0,01	7,99	7,99		0,00	8,00	8,00		0,00	8,00
3	8,01	8,01		0,00	8,02	8,02		0,00	8,01	8,02		0,01	8,02
4	7,99	7,99		0,00	7,98	7,98		0,00	7,98	7,97		0,01	7,98
5	7,99	8,00		0,01	7,99	7,98		0,01	8,00	7,99		0,01	7,99
6	8,00	8,00		0,00	8,01	8,01		0,00	7,99	8,00		0,01	8,00
7	7,98	7,98		0,00	7,96	7,98		0,02	7,96	7,96		0,00	7,97
8	7,96	7,96		0,00	7,96	7,96		0,00	7,97	7,97		0,00	7,96
9	8,01	8,01		0,00	8,02	8,00		0,02	8,01	8,01		0,00	8,01
10	8,01	8,01		0,00	7,98	7,99		0,01	8,01	8,00		0,01	8,00
	Avg $\bar{x}$	8,00	Avg R	0,00	Avg $\bar{x}$	7,99	Avg R	0,01	Avg $\bar{x}$	7,99	Avg R	0,00	R_{PV} = 0,05

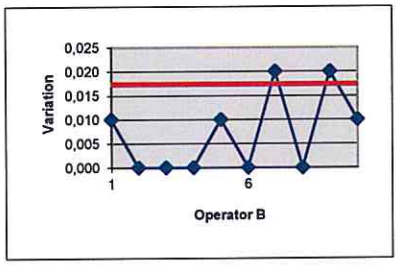
$\bar{\bar{R}}$: **0,005**

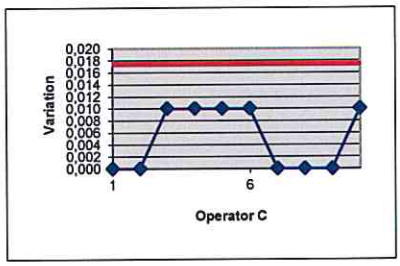
Average of average $\bar{\bar{x}}$: **7,994**
Maximum of $\bar{x}$: **8,00**
Minimum of $\bar{x}$: **7,99**

Difference $\bar{x}$: **0,00**

higher limit of control (LSCr) : **0,02** coefficient value D4 : **3,27**







Measures Analysis

Repetability EV (Equipement Variation)

$$\sigma_{EV} = \frac{\bar{\bar{R}}}{d_2}$$

For 2 trial
d2 = *1,13*
σ_{EV} = **0,00**

EV = *5,15* x 0,00 **EV = 0,02**

Reproductibility AV (Appraiser Variation)

$$\sigma_{MoyOp} = \frac{R_{\bar{x}}}{d_2^*} \quad \sigma_{AV} = \sqrt{\sigma_{MO}^2 - \frac{\sigma_{EV}^2}{n.r}}$$

For 3 Operators
d2 =* *1,91*
Nomber of parts / trial : *10*
Nomber of trial r : *2*
σ_{AV} = **0,00**

AV = *5,15* x 0,00 **AV = 0,01**

Répetability et reproductibility R & R

$$\sigma_{R\&R} = \sqrt{(\sigma_{EV})^2 + (\sigma_{AV})^2}$$

$\sigma_{R\&R}$ = **0,00**

R&R = *5,15* x 0,00 **R&R = 0,03**

Tolerance %

% EV = 100[(EV)/(Tolerance)]
% EV = 6,1%

Tolerance %

% AV = 100[(AV)/(Tolérance)]
% AV = 1,9%

Tolerance %

% R&R = 100[(R&R)/(Tolerance)]
% R&R = 6,4%

Gauge OK

d'après "General Motor long form"

ITW Automotive
Engineered Fasteners & Components

Check of process ability

(Variable mark)

Record No.: PPAP

Product : clip 6.5x12.5	**Parameter:** 8 ± 0,2	**Examiner:** Marc ROSTOCK
Part Nb : 303123	**High tolerance: (USL):** 8,2 **Bottom toler.:(LSL):** 7,8	**Sign:** RM
Note:	**Measuring instrument:** Digital slide calliper C84	**Date:** 30/11/2017
Minimal cp; cpk : 1,67	**Checking process:** by measurement	

Measured values:

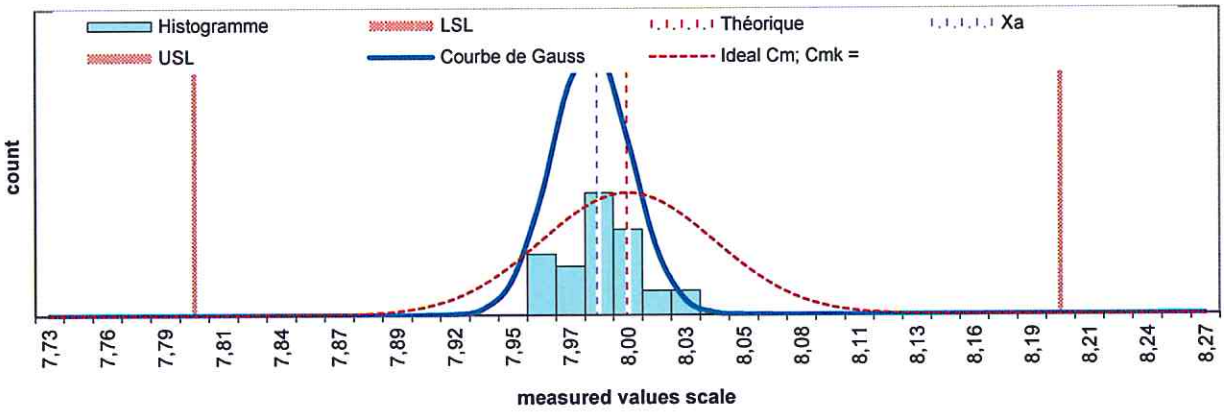
1	7,99	8,02	8,02	7,98	7,98	8,00	7,96	7,98	7,98	7,95
2	7,99	7,98	7,98	7,98	8,01	7,97	8,00	8,01	7,99	7,97
3	7,96	7,98	7,98	8,00	7,96	7,97	7,98	8,00	7,96	7,97
4										
5										
	5	10	15	20	25	30	35	40	45	50

arithmetic mean

x_a = 7,9833

standard deviation

s = 0,0181



Evaluation:

$$c_p = \frac{USL - LSL}{6s} \longrightarrow \textbf{cp} = 3{,}69$$

$$c_{pk_{USL}} = \frac{USL - x_a}{3s} \longrightarrow 4{,}00$$

$$c_{pk_{LSL}} = \frac{x_a - LSL}{3s} \longrightarrow 3{,}38$$

cpk = 3,38

Evaluation:	YES	NO
Statistic, stable?	X	
Answer datas to Gauss separation?	X	
Is machine capable?	**X**	

Note.: Machine is capable when process is statistic stable (see page 2) If datas answer to Gauss separation of probability

Corrective arrangement:

Certificate Of Analysis

Date of Issue: 28/03/2018

Item Code: A1270046C
NYLFOR A1 E6/2D H2 NERO Y1

Customer:	ITW EF & C. FRANCE SAS		
Batch:	PA31119Z7	Delivered Qty:	KG 24020
Inspec. N°:	18SP04483	Inspec. Date:	09/03/2018
Order N°:	OCTD - 50	Order Date:	13/02/2018
Cust. Ord. N°:	12856700107	Cust. Ord. Date:	08/01/2018
DDT N°:	XBD - 103	DDT Date:	28/03/2018

Physical properties	Values	Range	U.M.	Method
Density	1.082	1.08 - 1.12	g/cm³	ISO 1183
Moisture Content	0.13	max 0.2	%	INTERNAL
Viscosity, raw material, (Sulphuric acid)	2.39	2.28 - 2.49	-	ISO 307
Mechanical properties	**Values**	**Range**	**U.M.**	**Method**
Tensile Modulus	2109	min 2100	MPa	ISO 527
Charpy impact strength, notched (23 °C)	18.9	min 16	kJ/m²	ISO 179 - 1eA
Flammability	**Values**	**Range**	**U.M.**	**Method**
Flame Rating (1,6 mm)	HB	HB	Class	UL94
Flame Rating (3,2 mm)	HB	HB	Class	UL94

Notes:

The values reported in this Certificate of Analysis are the result of tests performed at SO.F.TER. laboratories on plates obtained by injection molding. Tests are carried out at 23°C unless otherwise specified.
This Certificate of Analysis complies with the norm UNI EN 10204:2005 2.3 and 3.1.
We hereby certify that the above mentioned product complies with the specifications.

This certificate is computer generated from results validated by the Quality Control Laboratory and is therefore not signed.

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