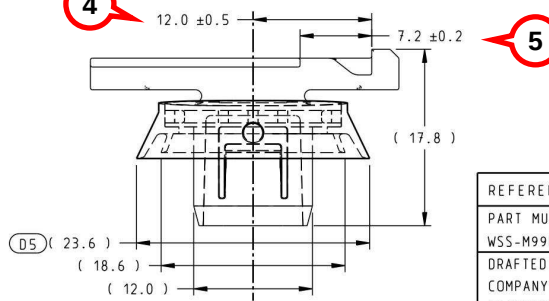
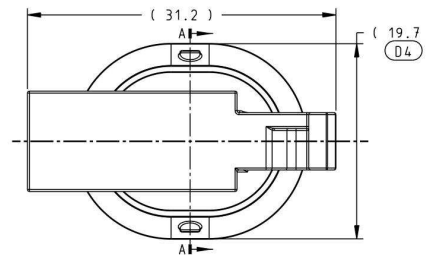
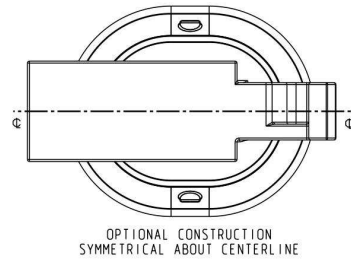
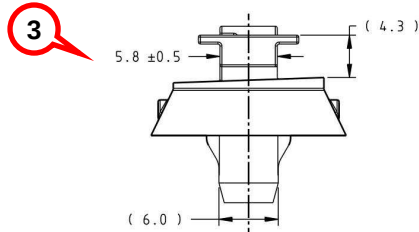
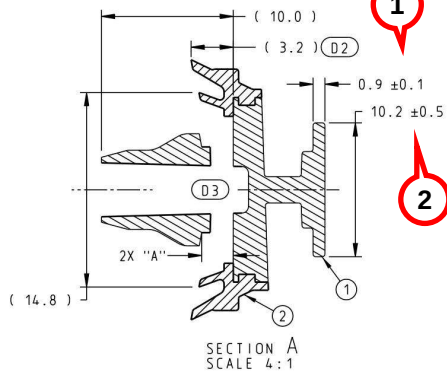
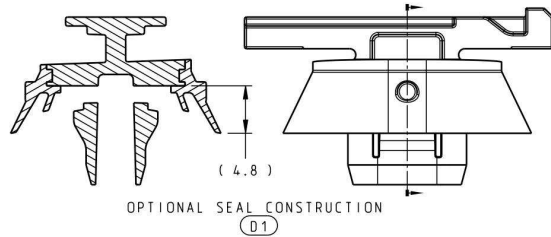
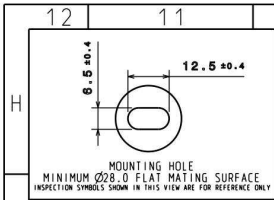


Part Submission Warrant

Part Name: <u>RET WIR CONN</u>		Cust. Part Number: <u>EU5T-14E042-AA</u>	
Shown on Drawing No. <u>EU5T-14E042-AA</u>		Org. Part Number: <u>228333001</u>	
Engineering Change Level: <u>AELE-E-12982958-141</u>		Dated: <u>16.05.2016</u>	
Additional Engineering Changes: _____		Dated: _____	
Safety and/or Government Regulation: ☐ Yes ☒ No		Purchase Order No. _____ Weight (kg): <u>0,002</u>	
Checking Aid No: _____		Checking Aid Engineering Change Level _____ Dated: _____	
ORGANIZATION MANUFACTURING INFORMATION		CUSTOMER SUBMITTAL INFORMATION	
A.Raymond Jablonec s.r.o. <u>49-504-2616</u>		Nursan Elektrik Donanım San. ve Tic. A.Ş.	
Organization Name & Supplier/Vendor Code		Customer Name/Division	
<u>Čs.Armády 27/4609</u>		<u>NADÍYE BARUTÇU</u>	
Street Address		Buyer/Buyer Code	
<u>Jablonec nad Nisou 466 05 Czech republic</u>		Application	
City <u>Jablonec nad Nisou</u> Region <u>466 05</u> Postal Code <u>Czech republic</u>			
City <u>Jablonec nad Nisou</u> Region <u>466 05</u> Postal Code <u>Czech republic</u>			
MATERIALS REPORTING			
Has customer-required Substances of Concern information been reported?		☒ Yes ☐ No ☐ n/a	
Submitted by IMDS or other customer format:		<u>IMDS ID - 705436287</u>	
Are polymeric parts identified with appropriate ISO marking codes?		☐ Yes ☐ No ☒ n/a	
REASON FOR SUBMISSION (Check at least one)			
☒ Initial Submission		☐ Change to optional Construction or Material	
☐ Engineering Change(s)		☐ Supplier or Material Source Change	
☐ Tooling: Transfer, Replacement, Refurbishment, or additional		☐ Change in part Processing	
☐ Correction of Discrepancy		☐ Parts Produced at Additional Location	
☐ Tooling Inactive > Than 1 year		☐ Other -please specify below	
		<u>Cavities no : 49A - 64A and 49B - 64B</u>	
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 organization's manufacturing location			
SUBMISSION RESULTS			
The Result for ☒ dimensional measurements ☒ material and functional tests ☐ appearance criteria ☒ statistical process package			
These results meet all design record requirements: ☒ Yes ☐ No (If "No" - Explanation Required)			
Mold/Cavity/Production Process <u>400009345 / 32</u>			
DECLARATION			
I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <u>24000 / 8 hours.</u>			
I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.			
EXPLANATION/COMMENTS: <u>A. Raymond considers the FMEA proprietary and our policy is not distribute it but make it available for review in our plant.</u>			
Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☒ n/a			
Organization Authorized Signature <u></u>		Date <u>04.09.2020</u>	
Print Name <u>Ondrejкова, Martina</u>		Phone No. <u>+420 483 358 109</u> FAX No. _____	
Title <u>Quality engineer</u>		E-mail: <u>Martina.Ondrejкова@araymond.com</u>	
FOR CUSTOMER USE ONLY (IF APPLICABLE)			
PPAP Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other _____			
Customer Signature: _____		Date: _____	
Print Name: _____		Customer Tracking Number (optional): _____	



LTRS		REVISIONS		
ORIGINATOR	CHECKER	ENGR APP	MATL APP	
RELEASED AELE E 11789584 823		20140219		
K.BOND	C.MURPHY	RVITALI		
A REVISED ITEM 2 MATERIAL SPEC RELEASED AELE-E-11789584-839		20140319		
K.BOND	C.MURPHY	RVITALI		
B1 REVISED A.RAYMOND (ART) PART NUMBERS RELEASED AELE-E-11789584-970		20150203		
K.BOND	J.RAY	RVITALI		
C1 ADDED NOTE RELEASED AELE-E-11789584-977		20150220		
K.BOND	J.RAY	RVITALI		
D1 ADDED VIEW FOR OPTIONAL SEAL CONSTRUCTION D2 DIM WAS (4.8) D3 REVISED SNAP FINGER HEIGHT D4 DIM WAS (21.3) D5 DIM WAS (25.1) RELEASED AELE E 12982958 141		20160516		
K.BOND	J.RAY	RVITALI		



REFERENCE			
PART MUST COMPLY WITH RESTRICTED SUBSTANCE MANAGEMENT STANDARD WSS-M99P9999-A1 TO SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT			
DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 28.0			3RD ANGLE PROJ DIMENSIONS ARE IN MILLIMETERS
CAD TYPE K-CAT1A5	CAD LOC. Tc	CAD FILE EU5T-14E042-A-DWG-01	DTMC IS MASTER
OPER. NO.	UNIT	DRAWING EU5T-14E042-AA	
DESIGN K.BOND	DETAIL K.BOND	TITLE RET WIR CONN	SHT 1 OF 1
CHECKED C.MURPHY	SAFETY		
SCALE 3:1	DATE 20140219	DIVISION PLANT	
 FORD MOTOR COMPANY			

DIM "A"		RECOMMENDED PANEL THICKNESS	ITEM (2)	ITEM (1)	ART NUMBER	FORD NUMBER
(3.1)	1.25-2.0	TPE-V 55 SHORE A PER: SAE J2558 TPV AA4655 BS1245 DASS EL180 FS6 GB12 SGAY50 TS2 COLOR: BLACK	PA66 PER WSK-M40706-A COLOR: NATURAL	230577-0-01	EU5T-14E042-BA	
(2.4)	0.6-1.25	TPE-V 55 SHORE A PER: SAE J2558 TPV AA4655 BS1245 DASS EL180 FS6 GB12 SGAY50 TS2 COLOR: BLACK	PA66 PER WSK-M40706-A COLOR: BLACK	228333-0-01	EU5T-14E042-AA	

DISCOLORATION PERMISSIBLE DUE TO MANUFACTURING PROCESS

SUPPLIER IDENTIFICATION MARK TO BE ADDED TO PART FOR MANUFACTURING POKA-YOKE (C1)

FLASH, HIGH GATES, DISTORTION, SHORTS AND ENCAPSULATED BUBBLES ARE PERMISSIBLE AS LONG AS FIT, FORM OR FUNCTION IS NOT AFFECTED

THIS UTILITY FASTENER MAY BE USED ACROSS MULTIPLE PROGRAMS. CHANGES TO THIS DRAWING REQUIRE SUBMISSION OF A CHANGE REQUEST FORM IN ACCORDANCE WITH FAP03-117.

FOR CURRENT RELEASE STATUS SEE THE WERS ENGINEERING NOTICE.

FOR SURFACE FINISH REQUIREMENTS SEE ENGINEERING NOTICE AND WX100.

CHANGES TO DESIGN, COMPOSITION OR PROCESSING OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION REQUIRE PRIOR APPROVAL FROM FORD MOTOR COMPANY PRODUCT ENGINEERING. REFER TO ISO/TS 16949.

BURRS-SHARP EDGES AND FOREIGN MATERIAL RESULTING FROM GOOD MANUFACTURING PRACTICE ARE ACCEPTABLE PROVIDING THEY ARE NOT DETRIMENTAL TO ASSEMBLY-FUNCTION OR SAFE HANDLING AS DETERMINED BY PRODUCT ENGINEERING

Appendix C - Production Part Approval, Dimensional Results

DAIMLERCHRYSLER



Production Part Approval Dimensional Test Results

ARaymond

A. RAYMOND JABLONEC s.r.o.

ORGANIZATION: A.Raymond Jablonec s.r.o.						PART NUMBER: E08737300		
SUPPLIER/VENDOR CODE: 49-504-2616						PART NAME: RET WIR CONN		
ARAYMOND PART NO.: 228333001						DESIGN RECORD CHANGE LEVEL:		
INSPECTION FACILITY: TW - Torque Wrench OS - 3D Optical Scanner						ENGINEERING CHANGE DOCUMENTS:		
3D - 3D Measuring Machine GP - Gauge Plug OP - Optical Projector						AELE-E-12982958-141		
C - Calliper M - Micrometer TM - Tensile Machine								
DI - Dial Indicator PP - Profile Projector HA - Halogen moisture analyzer								

ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	INS. FACIL.	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULT (DATA)	OK	NOT OK
01	length	0,90 ±0,10 mm	C	25.10.2016	32	0,90; 0,92; 0,91; 0,91; 0,91; 0,89; 0,92; 0,88; 0,90; 0,90; 0,95; 0,91; 0,90; 0,91; 0,89; 0,92; 0,88; 0,89; 0,92; 0,92; 0,90; 0,89; 0,91; 0,89; 0,89; 0,90; 0,92; 0,87; 0,90; 0,88; 0,91; 0,90	☒	☐
02	length	10,20 ±0,50 mm	C	25.10.2016	32	10,11; 10,12; 10,13; 10,11; 10,12; 10,12; 10,12; 10,12; 10,12; 10,12; 10,12; 10,12; 10,11; 10,13; 10,11; 10,12; 10,12; 10,12; 10,12; 10,11; 10,12; 10,12; 10,11; 10,12; 10,12; 10,11; 10,13; 10,12; 10,12; 10,13	☒	☐
03	length	5,80 ±0,50 mm	C	25.10.2016	32	5,80; 5,79; 5,80; 5,79; 5,80; 5,78; 5,80; 5,80; 5,81; 5,81; 5,81; 5,79; 5,83; 5,81; 5,79; 5,82; 5,80; 5,80; 5,81; 5,78; 5,81; 5,79; 5,80; 5,80; 5,79; 5,82; 5,80; 5,78; 5,80; 5,79; 5,81; 5,81	☒	☐
04	length	12,00 ±0,50 mm	OP	25.10.2016	32	11,85; 12,00; 11,91; 11,95; 11,80; 11,84; 11,76; 11,96; 11,78; 11,86; 11,99; 11,80; 11,94; 11,76; 11,92; 11,84; 11,79; 11,92; 11,84; 11,88; 11,77; 11,89; 11,76; 11,92; 11,96; 11,83; 11,96; 11,82; 11,90; 11,97; 11,85; 11,83	☒	☐
05	length	7,20 ±0,20 mm	OP	25.10.2016	32	7,36; 7,33; 7,33; 7,27; 7,32; 7,34; 7,29; 7,35; 7,28; 7,29; 7,28; 7,33; 7,38; 7,36; 7,30; 7,36; 7,35; 7,25; 7,26; 7,37; 7,28; 7,38; 7,37; 7,29; 7,25; 7,35; 7,38; 7,31; 7,35; 7,29; 7,35; 7,32	☒	☐

Blanket statements of conformance are unacceptable for any test results.

March
2006

CFG-1003

SIGNATURE

Černý Michal

TITLE

DATE

24.7.2017

Appendix D+E - Production Part Approval, Material and Performance Test Results



DAIMLERCHRYSLER



Production Part Approval Material
and Performance Test Results

A. RAYMOND JABLONEC s.r.o.

ORGANIZATION: A.Raymond Jablonec s.r.o. SUPPLIER/VENDOR CODE: 49-504-2616 ARAYMOND PART NO.: 228333001						PART NUMBER: E08737300 PART NAME: RET WIR CONN DESIGN RECORD CHANGE LEVEL: ENGINEERING CHANGE DOCUMENTS: AELE-E-12982958-141		
INSPECTION FACILITY: TW - Torque Wrench OS - 3D Optical Scanner 3D - 3D Measuring Machine GP - Gauge Plug OP - Optical Projector C - Calliper M - Micrometer TM - Tensile Machine DI - Dial Indicator PP - Profile Projector HA - Halogen moisture analyzer								
ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS	INS. FACIL.	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULT (DATA)	OK	NOT OK
06	fastening	hole 6,5±0,4 x 12,5±0,4 mm / thickness 0,6 - 1,25 mm thick panel min. Ø 28 mm flat mating surface		25.10.2016	32	OK	☒	☐
07	colour Item 1	black		25.10.2016	32	OK	☒	☐
08	colour Item 2	black		25.10.2016	32	OK	☒	☐
09	material Item 1	PA66 per WSK-M4D706-A		25.10.2016	32	Zytel MT409	☒	☐
10	material Item 2	TPE-V 55 Shore A per SAE J2558		25.10.2016	32	RTP 6091-55A	☒	☐

Blanket statements of conformance are unacceptable for any test results.

March
2006

CFG-1003

SIGNATURE

Černý Michal

TITLE

DATE

24.7.2017

INSPECTION CERTIFICATE

According to EN10204 3.1

From: **Specialty Products CZ**
Pekarská 14/628
155 00 PRAHA
CZECH REPUBLIC

To: **A.RAYMOND JABLONEC S.R.O.**
CS. ARMADY 27
466 05 JABLONEC NAD NISOU

Your order ref: **4500829723**
Your product ref: **505002571 (ZYTMT409AHS BK010 25 KG BAG)**

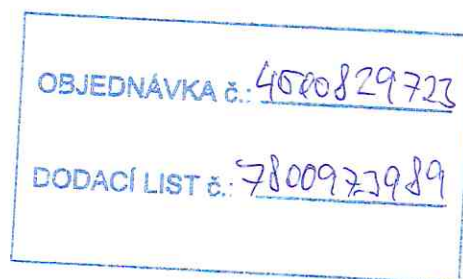
Product: **ZYTMT409AHS BK010 25 KG BAG**
Identification: **EMAUBWJ401**

Country of Origin: **Belgium**
Shipping Point: **GENK CLEARED WHSE 8933 B9** **07 Apr 2020**
DuPont Order /
Delivery Note: **2500460629 / 7800973989**

We confirm that this product is standard according to the DuPont Standard Product Criteria.

The following values result from measurements made on a representative sample for the above mentioned lot number according to the defined sampling plan.

Characteristic	Test Method	Unit	Value	Limits	
				Lower	Upper
Water Content at Packout, %	ISO 15512	%	0,04		0,18
Melt Viscosity, Pa.s	ISO 11443	Pa.s	85	40	120



Please consult our product literature or refer all inquiries to your DuPont representative at our local Sales Office. This certificate has been produced electronically and therefore does not require a signature.

Quality Group

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call +800-3876-6838 for a list of authorized distributors in your area. Copyright © 2006 du Pont de Nemours International S.A. All Rights Reserved.
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RTP Deutschland GmbH
Wallstadter Strasse 63
D - 68526 Ladenburg

**CERTIFICATE
OF
ANALYSIS**

19000137



TO: STRECK TRANSPORTE GMBH
FRAU EMMI LAGER BIGLER AG
BROMBACHER STR.61

DE-79539 LOERRACH

CUSTOMER NO	RTP ORDER NUMBER	SHIP DATE
100965	A22250-001	30-01-19
CUSTOMER ITEM NUMBER		
TPE-609155ABK-7		

TO THE ATTENTION OF QUALITY DEPARTMENT
THIS IS TO CERTIFY THAT THE PRODUCT LISTED
BELOW CONFORMS TO ALL BATCH ACCEPTANCE
REQUIREMENTS OF RTP COMPANY FORMULATION
AND QUALITY CONTROL.

LOT NUMBER	DESCRIPTION	CUSTOMER ORDER NUMBER
61908604Y	NYLABOND 6091-55A BLACK	619466

This COA is in accordance with EN 10204 section 3.1.

Property	Value (Metric)	Spec (Metric)	Method
El. Tensile Strength (MPa)	2.74	Min:1.98	ISO 37
El. Tensile Elongation (%)	316.0	Min:180.0	ISO 37
Specific Gravity	0.94	Rng:0.93-0.97	ASTM D 792
Shore A Hardness	56	Rng:54-60	ISO 868
LCR Viscosity @ 1200/s(Pa.s)	68	Max:100	ISO 11443
Stress @ 100% Elongation(MPa)	1.66	Rng:1.19-2.19	ISO 37

OBJEDNÁVKA č.: 4500744 338

DODACÍ LIST č.: 255 907

Ch. 
Christopher Grimm
Quality Manager RTP Ladenburg

X Série/Production			KONTROLNI PLAN / CONTROL PLAN							Pozn. / Remark:	
ARaymond MORE THAN FASTENING			Díl / Part: 228333001	Index změny / Change Level: Db / 16.2.2016	Název / Name: Connector with seal	Číslo zákazníka / CustPart: E08737300	Zákazník / Customer: LEAR CORPORATION				
Znak / Characteristic			Metoda / Method								
Číslo	Proces / Diagram procesu	Popis	Kl	Specifikace	Způsob kontroly	Rozsah	Četnost	Metoda kontroly	Plán reakce		
No.	Process / Flow-Chart	Description	Cl	Characteristics	Evaluation	Size	Frequency	Control Method	Reaction Plan		
1	Přijem základního materiálu Receipt of raw material	Dodací list Delivery note		Shoda s dokumentací According to contract	Vizuálně Visual	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97		
1		Množství Quantity		Shoda s objednávkou According to order	Vizuálně Visual	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97		
2		Kontrola hodnot uvedených na atestu Check of values mentioned on material atest		Hodnoty dle specifikace Results acc. to specification	Administrativní kontrola Administrative check	1	Šarže Charge	TOP 06-01-96 ; TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97		
3	Zaskladnění Storage	Kontrola balení Packaging		Bez porušení No damage Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1	Šarže Charge	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01-97		
2		Přijem materiálu na hlavní sklad Material storage		Mat. označen žlutým štítkem Mat. marked by yellow label	Vizuálně Visual	1	Paleta Palette	TOP 15-01-96	TOP 13-01-96 ; TOP 19-01-97		
3	Příprava základního materiálu Raw material preparation	Druh a typ základního materiálu Type of raw material		Shoda s dokumentací According to instruction	Vizuálně Visual	1	Paleta Palette	PP 09-14-99 ; PP 09-15-99	TOP 13-01-96 ; TOP 19-01-97		
1		Množství Quantity		Shoda s objednávkou According to order	Vizálně Visual	1	Paleta Palette	PP 09-14-99 ; PP 09-15-99	PP 09-14-99 ; PP 09-15-99		
4	Sušení granulátu Granulate drying	Teplota a čas sušení Temperature and time of drying		Shoda s objednávkou According to order	Vizuálně Visual	1	Zakázka Order	PP 09-14-99 ; PP 09-15-99	PP 09-14-99 ; PP 09-15-99		
5		Nasazení formy a seřízení lisu Preparation of mould and machine		Vstřikovací parametry dle SL Acc. to set-up card	Přovnáním nastavených hodnot a SL Review of set-up card and machine settings		Každé seřízení Each set-up	PP 09-01-96	TOP 13-01-96 ; TOP 19-01-97		
6	Kontrola 1.zdvíhu Production approval	Kontrola 1.zdvíhu Production approval		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96	Přeseřdit nastavení vstřík. lisu Adjust machine setting		
1		Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96 ; Q- výkres	Přeseřdit nastavení vstřík. lisu Adjust machine setting		
2		Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96 ; Q- výkres	Přeseřdit nastavení vstřík. lisu Adjust machine setting		

X Série/Production			KONTROLNÍ PLAN / CONTROL PLAN				Pozn. / Remark:	
			Díl / Part: 228333001	Index změny / Change Level: Db / 16.2.2016	Název / Name: Connector with seal	Číslo zákazníka / CustPart: E08737300	Zákazník / Customer: LEAR CORPORATION	
Znak / Characteristic			Metoda / Method					
Číslo No.	Popis Description	KI CI	Specifikace Characteristics	Způsob kontroly Evaluation	Rozsah Size	Četnost Frequency	Metoda kontroly Control Method	Plán reakce Reaction Plan
3	Hmotnost zdvihu - SPC Weigh of stroke - SPC		Dodržení regulačních mezí Cp, Cpk > 1,67	Vážení weighing	3 zdvíhy 3 strokes	Zakázka Order	PP 09-01-96 ; Q- výkres	Přeseřdit nastavení vstřík. lisu Adjust machine setting
4	Významné znaky Significant characteristics		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Zakázka Order	PP 09-01-96 ; Q- výkres	Přeseřdit nastavení vstřík. lisu Adjust machine setting
	Průběžná kontrola Production approval		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96	Informovat seřizovače Notify adjuster
1	Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
2	Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
3	Hmotnost zdvihu - SPC Weigh of stroke - SPC		Dodržení regulačních mezí ; Cp, Cpk > 1,67	Vážení weighing	3 zdvíhy 3 strokes	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster
4	Významné znaky Significant characteristics		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Po 2 hod. Every 2 hours	PP 09-02-96 ; Q- výkres	Informovat seřizovače Notify adjuster Adjust machine setting
	Kontrola posledního zdvihu Check of last stroke		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
1	Vizuální kontrola Visual check		Kontrola dle Q-výkresu Check acc. to Q-drawing	Vizuálně Visual	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
2	Zkoušky dle Q-výkresu Check acc. Q-drawing		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97
3	Významné znaky Significant characteristics		Kontrola dle Q-výkresu Check acc. to Q-drawing	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	Dávka Batch	TOP 10-01-96	TOP 13-01-96 ; TOP 19-01- 97 Adjust machine setting
	Rekvalifikace na zástupce Layout inspection and functional testing for representative		Rozměry a tce dle PPAP výkresu Dimensions and functional testing acc. to PPAP.dwg	Měření, funkční test Measuring, function test	1 zdvih 1 stroke	1 ročně annulay	TOP 17-04-03	TOP 17-04-03 ; TOP 13-01- 96
	Hmotnost dílu Weight of part		Shoda se skl. systémem Acc. storage system	Vážení weighing	1	Dávka Batch	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01- 97



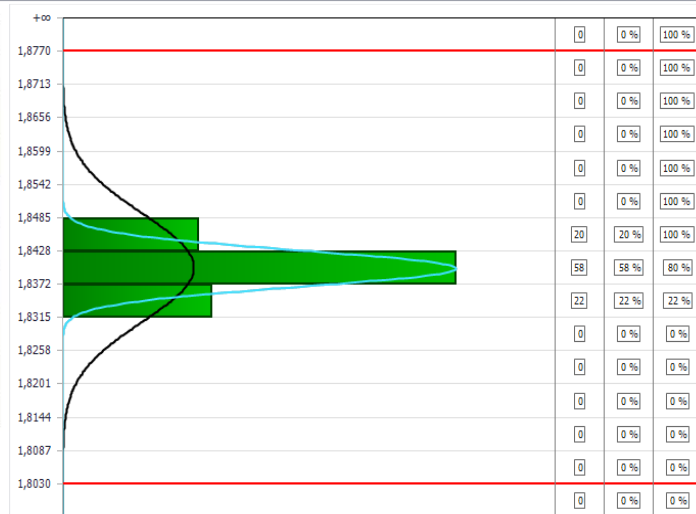
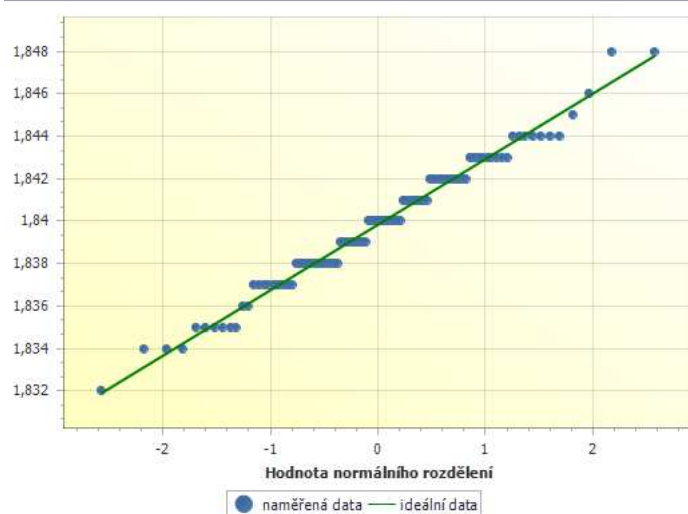
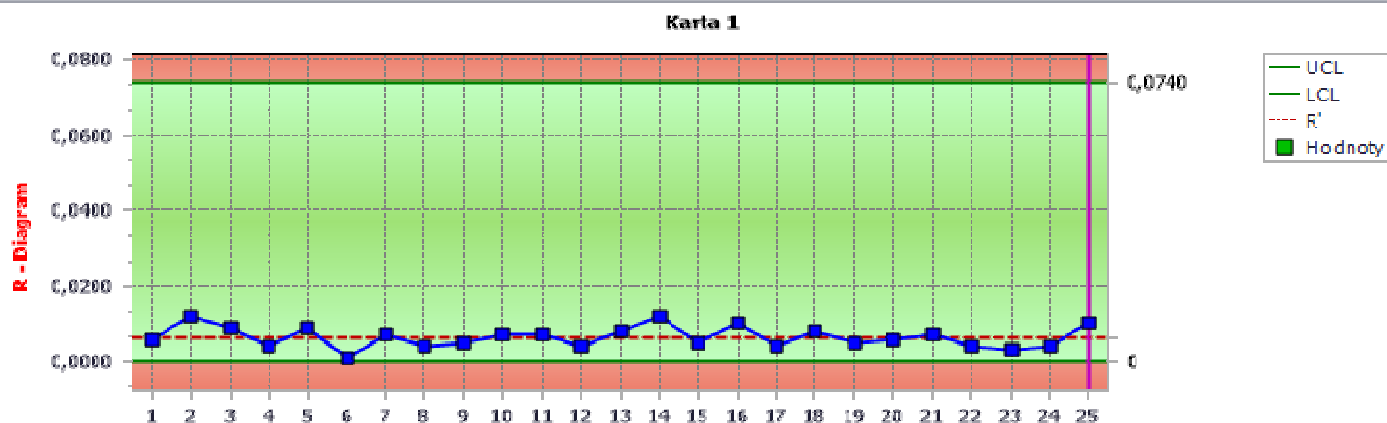
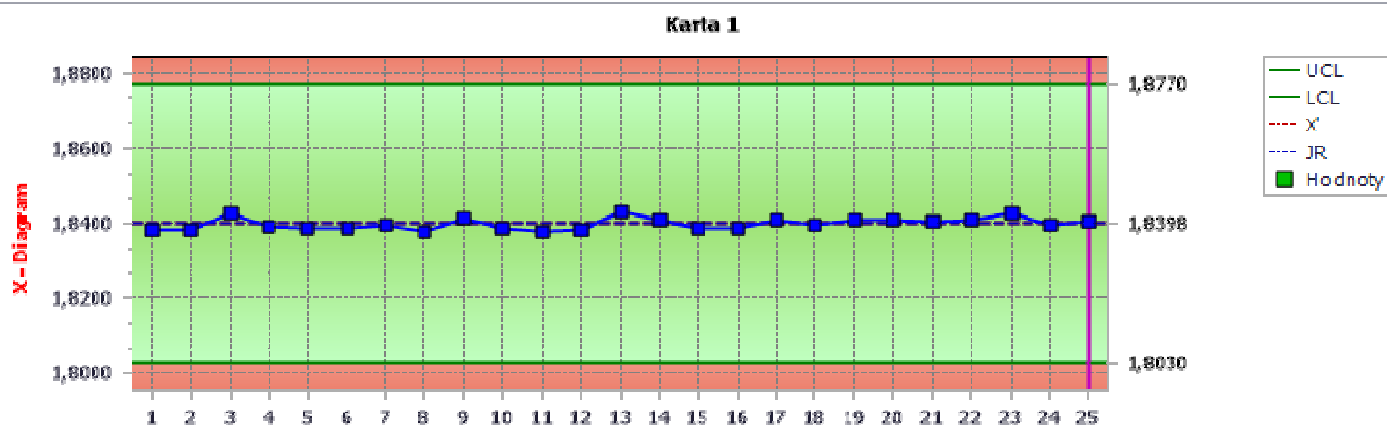
X Série/Production		KONTROLNI PLAN / CONTROL PLAN					Pozn. / Remark:				
		Díl / Part:		Index změny / Change Level:		Název / Name:		Číslo zákazníka / CustPart:		Zákazník / Customer:	
		228333001		Db / 16.2.2016		Connector with seal		E08737300		LEAR CORPORATION	
Znak / Characteristic		Metoda / Method									
Číslo	Proces / Diagram procesu	Číslo	Popis	Kl	Specifikace	Způsob kontroly	Rozsah	Četnost	Metoda kontroly	Plán reakce	
No.	Process / Flow-Chart	No.	Description	Cl	Characteristics	Evaluation	Size	Frequency	Control Method	Reaction Plan	
11	Balení Packaging		Množství a druh balení Quantity and sort of package		Shoda se skl. systémem Acc. storage systém	Vizuálně Visual	1	Dávka Batch	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01-97	
12	Doprava Shipping		Číslo dílu a množství Part Number and quantity		Shoda s dodacím listem Acc. delivery note	Vizuálně Visual	1	Dodávka Delivery	PP 15-01-96 ; PP 15-06-99	TOP 13-01-96 ; TOP 19-01-97	

Initial Process Study - SPC

Variable characteristic - weight

Part number:	228333001	Mould number:	400009345	Gauge:	Sartorius LP 1200 (0 - 1200 g)
Part name:	Connector with seal / Konektor			Sample size:	4
Char. code:	41			Sample freq.:	0
Char. name:	Hmotnost / Weight			Card size:	25

Nom.: 1,840 USL: 1,877 LSL: 1,803 g



Pp	3,99	Cp	3,99	X':	1,8398	Over USL:	0	PE:	0
Ppk	3,97	Cpk	3,97	R:	0,0160	Under LSL:	0	Expected error %	0
Calculation method: DIN 21747									
M1 (L1;D4)		M1 (L1;D2)		S:	0,0031				

A.RAYMOND JABLONEC s.r.o.										MSA (GRR method)			
Part Number 222851001					Gage Name Váha - scale			Appraiser A Trpišovský Lukáš					
Part Name Cursor front right					Gage Number F 048			Appraiser B Janoušek Milan					
Characteristic	DT 37,279	JR 38,04	HT 38,801	Tolerance 1,522	Gage Type Sartorius LA620 S			Appraiser C Ondřejková Martina					
Classification weight			Units g	Result Measurement system passed			Parts 10	Appraisers 3	Date 07.01.2020				

APPRAISER TRIAL	PART										AVERAGE	
	1	2	3	4	5	6	7	8	9	10		
A	1	38,399	38,289	38,499	38,336	38,369	38,531	38,452	38,349	38,349	38,434	38,4007
	2	38,399	38,289	38,499	38,336	38,369	38,531	38,452	38,349	38,35	38,434	38,4008
	3	38,398	38,289	38,45	38,336	38,369	38,532	38,453	38,438	38,35	38,434	38,4049
	AVE	38,3987	38,289	38,4827	38,336	38,369	38,5313	38,4523	38,3787	38,3497	38,434	Xa = 38,4021
	R	0,001	0	0,049	0	0	0,001	0,001	0,089	0,001	0	Ra = 0,0142
PART AVERAGE		38,3988	38,2912	38,4881	38,3358	38,3691	38,5313	38,4614	38,3586	38,3501	38,4352	X" = 38,402Rp = 0,2401
B	1	38,399	38,299	38,45	38,335	38,369	38,532	38,451	38,348	38,35	38,436	38,3969
	2	38,398	38,289	38,499	38,335	38,369	38,531	38,451	38,349	38,35	38,436	38,4007
	3	38,398	38,289	38,499	38,336	38,369	38,531	38,451	38,348	38,35	38,436	38,4007
	AVE	38,3983	38,2923	38,4827	38,3353	38,369	38,5313	38,451	38,3483	38,35	38,436	Xb = 38,3994
	R	0,001	0,01	0,049	0,001	0	0,001	0	0,001	0	0	Rb = 0,0063
PART AVERAGE		38,3988	38,2912	38,4881	38,3358	38,3691	38,5313	38,4614	38,3586	38,3501	38,4352	X" = 38,402Rp = 0,2401
C	1	38,399	38,299	38,499	38,336	38,369	38,531	38,451	38,349	38,351	38,435	38,4019
	2	38,4	38,289	38,499	38,336	38,369	38,532	38,451	38,349	38,351	38,436	38,4012
	3	38,399	38,289	38,499	38,336	38,37	38,531	38,541	38,348	38,35	38,436	38,4099
	AVE	38,3993	38,2923	38,499	38,336	38,3693	38,5313	38,481	38,3487	38,3507	38,4357	Xc = 38,4043
	R	0,001	0,01	0	0	0,001	0,001	0,09	0,001	0,001	0,001	Rc = 0,0106
PART AVERAGE		38,3988	38,2912	38,4881	38,3358	38,3691	38,5313	38,4614	38,3586	38,3501	38,4352	X" = 38,402Rp = 0,2401
([Ra = 0,0142] + [Rb = 0,0063] + [Rc = 0,0106]) / [Count Appraiser = 3] =												R" = 0,01037
[Max X = 38,541] - [Min X = 38,28] = Xdiff = 0,005 9												
* [R" = 0,010] x [D4 = 2,574] = UCLr = 0												

Repeatability - Equipment Variation (EV) $EV = \bar{R} * K_1$ $EV = 0,010 * 0,591$ $= 0,006$	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>Trials</td><td>K1</td></tr> <tr><td>2</td><td>0,8862</td></tr> <tr><td>3</td><td>0,5908</td></tr> </table> %EV = TV = 100 [0,006/0,076] = 8,08 %	Trials	K1	2	0,8862	3	0,5908														
Trials	K1																				
2	0,8862																				
3	0,5908																				
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n * r}\right)}$ $AV = \sqrt{(0,005 * 0,523)^2 - \left(\frac{0,006^2}{10 * 9}\right)}$ $= 0,002$ n = dily r = měření	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>Appraisers</td><td>2</td><td>3</td></tr> <tr><td>K2</td><td>0,7071</td><td>0,5231</td></tr> </table> %AV = TV = 100 [0,002/0,076] = 3,04 %	Appraisers	2	3	K2	0,7071	0,5231														
Appraisers	2	3																			
K2	0,7071	0,5231																			
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ $GRR = \sqrt{0,006^2 + 0,002^2}$ $= 0,007$	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>Parts</td><td>K3</td></tr> <tr><td>2</td><td>0,7071</td></tr> <tr><td>3</td><td>0,5231</td></tr> <tr><td>4</td><td>0,4467</td></tr> <tr><td>5</td><td>0,4030</td></tr> <tr><td>6</td><td>0,3742</td></tr> <tr><td>7</td><td>0,3534</td></tr> <tr><td>8</td><td>0,3375</td></tr> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table> %GRR = TV = 100 [0,007/0,076] = 8,63 %	Parts	K3	2	0,7071	3	0,5231	4	0,4467	5	0,4030	6	0,3742	7	0,3534	8	0,3375	9	0,3249	10	0,3146
Parts	K3																				
2	0,7071																				
3	0,5231																				
4	0,4467																				
5	0,4030																				
6	0,3742																				
7	0,3534																				
8	0,3375																				
9	0,3249																				
10	0,3146																				
Part Variation (PV) $PV = R_P * K_3$ $PV = 0,240 * 0,315$ $= 0,076$	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table> %PV = TV = 100 [0,076/0,076] = 99,63 %	9	0,3249	10	0,3146																
9	0,3249																				
10	0,3146																				
Tolerance (TV) $TV = \sqrt{GRR^2 + PV^2}$ $TV = \sqrt{0,007^2 + 0,076^2}$ $= 0,076$	ndc = 1.41[PV/GRR] = 1.41 [0,076/0,007] = 16,275 ~ 16																				

Notes: Notes: This analysis could be use as a representative for the similar group of parts ☒ yes *Janoušek*

A.RAYMOND JABLONEC s.r.o.						MSA (GRR method)					
Part Number 175182000					Gage Name Posuvka digi.			Appraiser A Trpišovský Lukáš			
Part Name Tape on clip					Gage Number A 097			Appraiser B Janoušek Milan			
Characteristic	DT 20,7	JR 21	HT 21,3	Tolerance +/- 0,3000	Gage Type			Appraiser C Ondřejková Martina			
Classification length			Units mm	Result Measurement system passed			Parts 10	Appraisers 3	Date 06.01.2020		

APPRaiser TRIAL	PART										AVERAGE	
	1	2	3	4	5	6	7	8	9	10		
A	1	21	20,97	21,02	20,96	20,92	20,9	21,01	20,94	20,89	21	20,961
	2	21	20,97	21,01	20,96	20,92	20,9	21,01	20,95	20,88	21	20,96
	3	21,01	20,97	21,02	20,97	20,91	20,91	21	20,95	20,89	21,01	20,964
	AVE	21,0033	20,97	21,0167	20,9633	20,9167	20,9033	21,0067	20,9467	20,8867	21,0033	Xa = 20,9617
	R	0,01	0	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	Ra = 0,009
PART AVERAGE		21,0067	20,9722	21,0178	20,9622	20,9189	20,9022	21,0067	20,9478	20,8867	21,0067	X" = 20,9628Rp = 0,1311
B	1	21,01	20,98	21,02	20,96	20,92	20,9	21,01	20,94	20,89	21,01	20,964
	2	21,01	20,97	21,02	20,96	20,92	20,9	21,01	20,95	20,89	21,01	20,964
	3	21	20,98	21,01	20,96	20,92	20,9	21	20,95	20,88	21	20,96
	AVE	21,0067	20,9767	21,0167	20,96	20,92	20,9	21,0067	20,9467	20,8867	21,0067	Xb = 20,9627
	R	0,01	0,01	0,01	0	0	0	0,01	0,01	0,01	0,01	Rb = 0,007
PART AVERAGE		21,0067	20,9722	21,0178	20,9622	20,9189	20,9022	21,0067	20,9478	20,8867	21,0067	X" = 20,9628Rp = 0,1311
C	1	21,01	20,97	21,02	20,96	20,92	20,91	21,01	20,95	20,89	21,01	20,965
	2	21,01	20,97	21,02	20,96	20,92	20,9	21,01	20,95	20,89	21,01	20,964
	3	21,01	20,97	21,02	20,97	20,92	20,9	21	20,95	20,88	21,01	20,963
	AVE	21,01	20,97	21,02	20,9633	20,92	20,9033	21,0067	20,95	20,8867	21,01	Xc = 20,964
	R	0	0	0	0,01	0	0,01	0,01	0	0,01	0	Rc = 0,004
PART AVERAGE		21,0067	20,9722	21,0178	20,9622	20,9189	20,9022	21,0067	20,9478	20,8867	21,0067	X" = 20,9628Rp = 0,1311
([Ra = 0,009] + [Rb = 0,007] + [Rc = 0,004]) / [Count Appraiser = 3] =											R" = 0,00667	
[Max X = 21,020] - [Min X = 20,88] = Xdiff = 0,002												
* [R" = 0,007] x [D4 = 2,574] = UCLr = 0												

Repeatability - Equipment Variation (EV) $EV = \bar{\bar{R}} * K_1$ $EV = 0,007 * 0,591$ $= 0,004$				<table border="1" style="width: 100%;"> <tr><th>Trials</th><th>K1</th></tr> <tr><td>2</td><td>0,8862</td></tr> <tr><td>3</td><td>0,5908</td></tr> </table>	Trials	K1	2	0,8862	3	0,5908	%EV = TV = 100 [0,004/0,041] = 9,50 %														
Trials	K1																								
2	0,8862																								
3	0,5908																								
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n+r}\right)}$ $AV = \sqrt{(0,002 * 0,523)^2 - \left(\frac{0,004^2}{10+3}\right)}$ $= 0,001$ n = díly r = měření				<table border="1" style="width: 100%;"> <tr><th>Appraisers</th><th>2</th><th>3</th></tr> <tr><td>K2</td><td>0,7071</td><td>0,5231</td></tr> </table>	Appraisers	2	3	K2	0,7071	0,5231	%AV = TV = 100 [0,001/0,041] = 2,38 %														
Appraisers	2	3																							
K2	0,7071	0,5231																							
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ $GRR = \sqrt{0,004^2 + 0,001^2}$ $= 0,004$				<table border="1" style="width: 100%;"> <tr><th>Parts</th><th>K3</th></tr> <tr><td>2</td><td>0,7071</td></tr> <tr><td>3</td><td>0,5231</td></tr> <tr><td>4</td><td>0,4467</td></tr> <tr><td>5</td><td>0,4030</td></tr> <tr><td>6</td><td>0,3742</td></tr> <tr><td>7</td><td>0,3534</td></tr> <tr><td>8</td><td>0,3375</td></tr> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table>	Parts	K3	2	0,7071	3	0,5231	4	0,4467	5	0,4030	6	0,3742	7	0,3534	8	0,3375	9	0,3249	10	0,3146	%GRR = TV = 100 [0,004/0,041] = 9,80 %
Parts	K3																								
2	0,7071																								
3	0,5231																								
4	0,4467																								
5	0,4030																								
6	0,3742																								
7	0,3534																								
8	0,3375																								
9	0,3249																								
10	0,3146																								
Part Variation (PV) $PV = R_P * K_3$ $PV = 0,131 * 0,315$ $= 0,041$					%PV = TV = 100 [0,041/0,041] = 99,52 %																				
Tolerance (TV) $TV = \sqrt{GRR^2 + PV^2}$ $TV = \sqrt{0,004^2 + 0,041^2}$ $= 0,041$					ndc = 1.41[PV/GRR] = 1.41 [0,041/0,004] = 14,324 ~ 14																				

Notes:	Notes: This analysis could be use as a representative for the similar group of parts ☒ yes <i>for X</i>
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A.RAYMOND JABLONEC s.r.o.						MSA (GRR method)					
Part Number 248127000					Gage Name Optical profilprojector			Appraiser A Ondřejková Martina			
Part Name tape on clip for dia.6,5					Gage Number I 002			Appraiser B Trpišovský Lukáš			
Characteristic	DT 7,5	JR 8	HT 8,5	Tolerance +/- 0,5	Gage Type Merlin			Appraiser C Janoušek Milan			
Classification length			Units mm	Result Measurement system passed			Parts 10	Appraisers 3	Date 07.01.2020		

APPRaiser TRIAL	PART										AVERAGE	
	1	2	3	4	5	6	7	8	9	10		
A	1	8,19	8,36	8,11	7,99	8,27	8,29	8,42	8,22	7,98	7,85	8,168
	2	8,2	8,36	8,12	7,98	8,28	8,29	8,42	8,23	7,97	7,86	8,171
	3	8,2	8,35	8,12	7,99	8,28	8,28	8,43	8,23	7,97	7,86	8,171
	AVE	8,1967	8,3567	8,1167	7,9867	8,2767	8,2867	8,4233	8,2267	7,9733	7,8567	Xa = 8,17
	R	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	Ra = 0,01
PART AVERAGE		8,1978	8,3556	8,1167	7,9878	8,2778	8,2867	8,4222	8,2278	7,9733	7,8567	X" = 8,1702Rp = 0,5656
B	1	8,19	8,35	8,12	7,99	8,27	8,29	8,42	8,23	7,97	7,86	8,169
	2	8,2	8,35	8,11	7,99	8,28	8,29	8,42	8,23	7,97	7,86	8,17
	3	8,2	8,36	8,12	7,99	8,28	8,28	8,43	8,22	7,98	7,86	8,172
	AVE	8,1967	8,3533	8,1167	7,99	8,2767	8,2867	8,4233	8,2267	7,9733	7,86	Xb = 8,1703
	R	0,01	0,01	0,01	0	0,01	0,01	0,01	0,01	0,01	0	Rb = 0,008
PART AVERAGE		8,1978	8,3556	8,1167	7,9878	8,2778	8,2867	8,4222	8,2278	7,9733	7,8567	X" = 8,1702Rp = 0,5656
C	1	8,2	8,36	8,11	7,98	8,28	8,29	8,42	8,23	7,97	7,85	8,169
	2	8,2	8,35	8,12	7,99	8,28	8,29	8,42	8,23	7,97	7,85	8,17
	3	8,2	8,36	8,12	7,99	8,28	8,28	8,42	8,23	7,98	7,86	8,172
	AVE	8,2	8,3567	8,1167	7,9867	8,28	8,2867	8,42	8,23	7,9733	7,8533	Xc = 8,1703
	R	0	0,01	0,01	0,01	0	0,01	0	0	0,01	0,01	Rc = 0,006
PART AVERAGE		8,1978	8,3556	8,1167	7,9878	8,2778	8,2867	8,4222	8,2278	7,9733	7,8567	X" = 8,1702Rp = 0,5656
([Ra = 0,01] + [Rb = 0,008] + [Rc = 0,006]) / [Count Appraiser = 3] = R" = 0,008												
[Max X = 8,430] - [Min X = 7,85] = Xdiff = 0,000												
* [R" = 0,008] x [D4 = 2,574] = UCLr = 0												

Repeatability - Equipment Variation (EV) $EV = \bar{R} * K_1$ $EV = 0,008 * 0,591$ $= 0,005$				<table border="1" style="width: 100%;"> <tr><th>Trials</th><th>K1</th></tr> <tr><td>2</td><td>0,8862</td></tr> <tr><td>3</td><td>0,5908</td></tr> </table>	Trials	K1	2	0,8862	3	0,5908	%EV = TV = 100 [0,005/0,178] = 2,66 %														
Trials	K1																								
2	0,8862																								
3	0,5908																								
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{(\bar{X}_{DIFF} * K_2)^2 - \left(\frac{EV^2}{n * r}\right)}$ $AV = \sqrt{(3,333E-4 * 0,523)^2 - \left(\frac{0,005^2}{10 * 9}\right)}$ $= 0,000$ n = díly r = měření				<table border="1" style="width: 100%;"> <tr><th>Appraisers</th><th>2</th><th>3</th></tr> <tr><td>K2</td><td>0,7071</td><td>0,5231</td></tr> </table>	Appraisers	2	3	K2	0,7071	0,5231	%AV = TV = 100 [0/0,178] = 0,00 %														
Appraisers	2	3																							
K2	0,7071	0,5231																							
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ $GRR = \sqrt{0,005^2 + 0^2}$ $= 0,005$				<table border="1" style="width: 100%;"> <tr><th>Parts</th><th>K3</th></tr> <tr><td>2</td><td>0,7071</td></tr> <tr><td>3</td><td>0,5231</td></tr> <tr><td>4</td><td>0,4467</td></tr> <tr><td>5</td><td>0,4030</td></tr> <tr><td>6</td><td>0,3742</td></tr> <tr><td>7</td><td>0,3534</td></tr> <tr><td>8</td><td>0,3375</td></tr> <tr><td>9</td><td>0,3249</td></tr> <tr><td>10</td><td>0,3146</td></tr> </table>	Parts	K3	2	0,7071	3	0,5231	4	0,4467	5	0,4030	6	0,3742	7	0,3534	8	0,3375	9	0,3249	10	0,3146	%GRR = TV = 100 [0,005/0,178] = 2,66 %
Parts	K3																								
2	0,7071																								
3	0,5231																								
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8	0,3375																								
9	0,3249																								
10	0,3146																								
Part Variation (PV) $PV = R_P * K_3$ $PV = 0,566 * 0,315$ $= 0,178$					%PV = TV = 100 [0,178/0,178] = 99,96 %																				
Tolerance (TV) $TV = \sqrt{GRR^2 + PV^2}$ $TV = \sqrt{0,005^2 + 0,178^2}$ $= 0,178$					ndc = 1.41[PV/GRR] = 1.41 [0,178/0,005] = 53,079 ~ 53																				

Notes:	Notes: This analysis could be use as a representative for the similar group of parts ☒ yes <i>Janoušek</i>
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This document provides basic information for correct usage of parts manufactured by the company

To achieve required mechanical properties, some parts are water conditioned. Before using the parts, it is necessary to store these parts in closed bags, see figure 1. We recommend resealing the bags after 8 hours (maximum) of open condition to maintain its mechanical properties.



The figure 1 Water conditioned parts

Parts with film hinges

Thin surfaces (see figure 2) of film hinges can become fragile during cold weather months, such as on winter season. Consequently, parts' breaking on this area maybe observed therefore we recommend before using them to heat them (20-25°C / 48 h).

For parts manufactured with polypropylene (PP) material a whitening of the material on the area when flex or bend may appear. This whitening condition is not a defect nor does it affect the fit and function.



The figure 2 Parts with film hinges

Small visual defects

Parts which have prescribed tread pattern and appearance can appear small visual defects (like burr/flash, ejector mark, parting line, burn, spots, short shot/not completely moulded, sink marks, see figure 3 to 9), these types of defects do not have negative impact for proper part usage.



The figure 3 Burr/flash



The figure 4 Ejector marks and burrs



The figure 5 Parting line



The figure 6 Burn



The figure 7 Spots



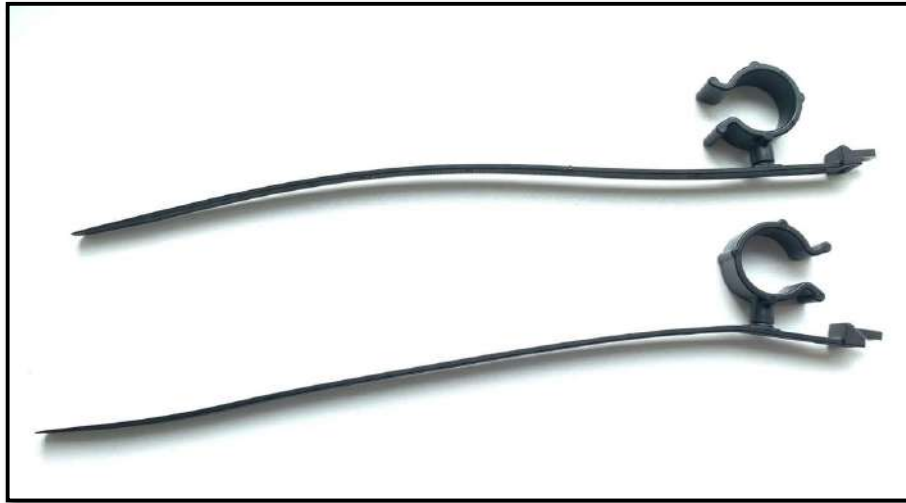
The figure 8 Short shot/not completely moulded



The figure 9 sink marks

Assembled swivel clips

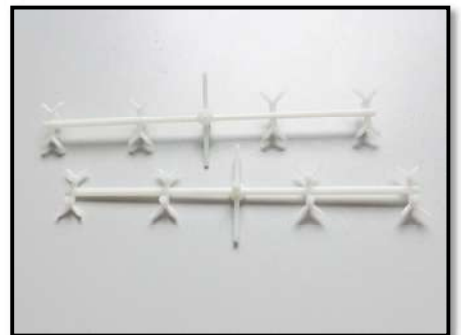
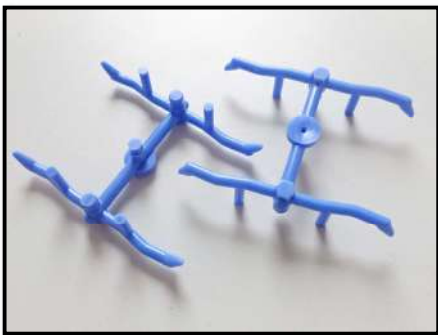
During the transport of the part can happen that clip will turn, (regarding the drawing), this is given by property of the part which is revolving according to its axis, see picture 10. Also, the straps can lightly bend because of transport and they will not be straight → even this is not the defect and it does not influence the function of the product, see figure 10.



The figure 10 swivel clips

Sprues in packaging

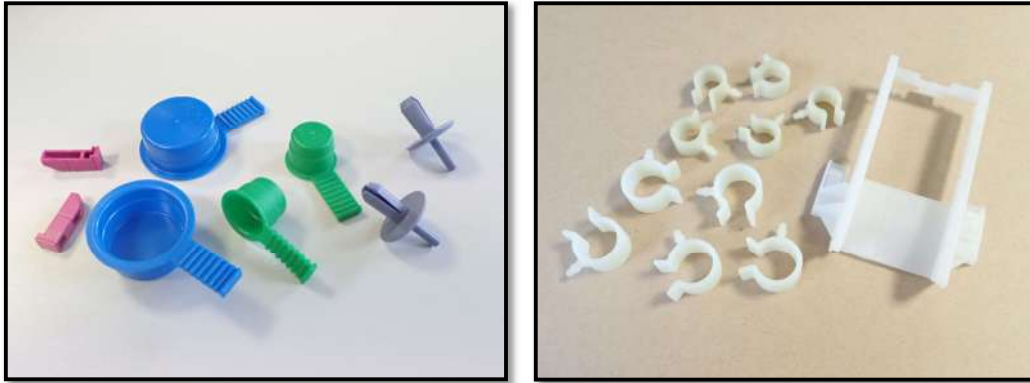
Despite maximum trying to separate sprues system from completed parts can happen appearing of sprues in the final packaging, see figure 11.



The figure 11 Sprues in packaging

Color of parts

For parts that have not been defined with shade of color by RAL or others agreed standards, are parts delivered in general range according to the color defined in the drawing (natural color, black, etc.), see figure 12. In case that the customer uses a camera for part presence inspection, the customer must notify the manufacturer prior to implementing vision camera system.



The figure 12 Parts colors

Parts application

Customers must use the parts as specified on the drawing (see figure 13). In the case of using parts on a different specification, A.Raymond Jablonec can do informative parts testing.

Nekotované rozměry převzít z 3D modelu
Missing dimensions have to be taken
from 3D data

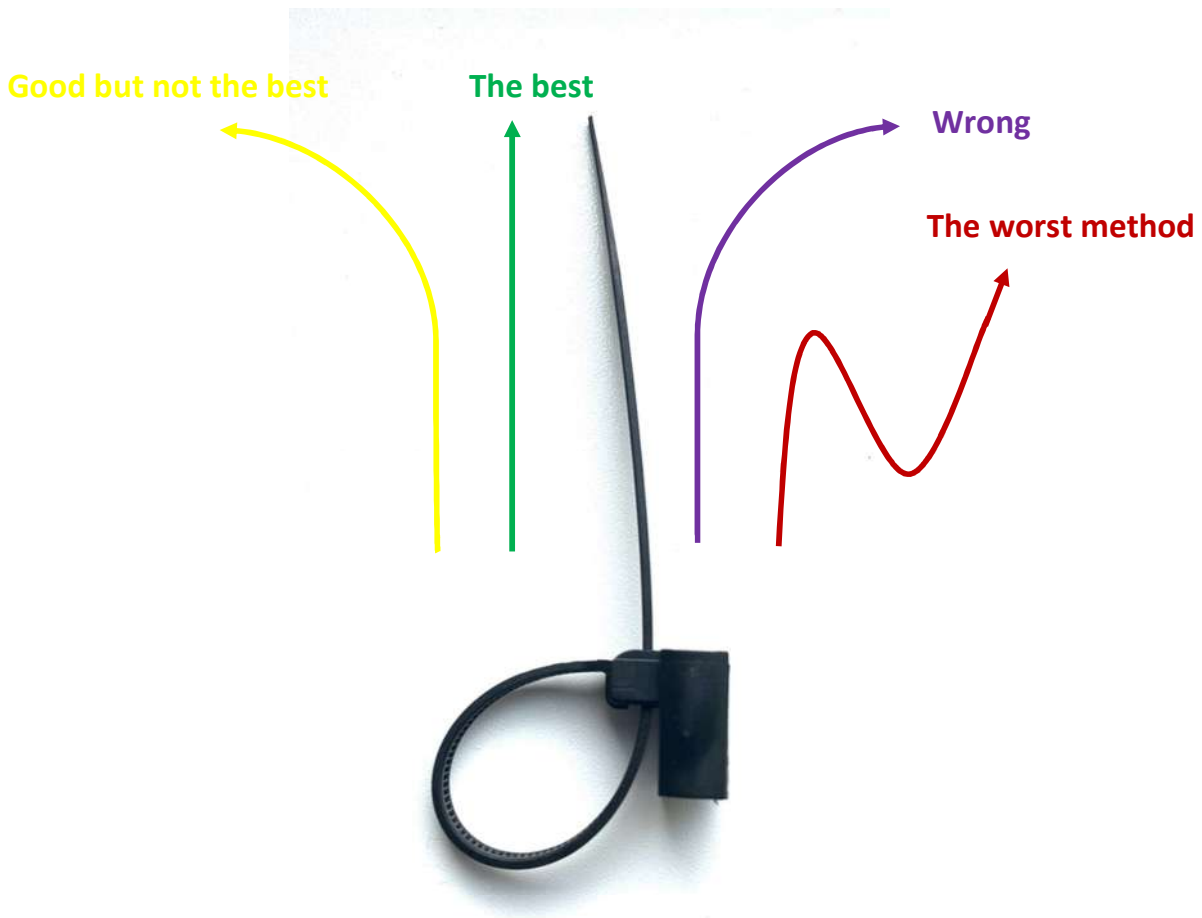
Urceno pro svazky $\varnothing$ 0.5 ... 25 mm
Upinací průměr díry $\varnothing$ 6.5+0.2 mm
Upinací tloušťka plechu: 0.6 ... 1.3 mm

Suitable for cable bundles $\varnothing$ 0.5 ... 25 mm
Fastening hole $\varnothing$ 6.5+0.2 mm
Fastening thickness: 0.6 ... 1.3 mm

The figure 13 Parts application

Cable straps

For tightening cable straps, we recommend using tightening gun set up to the force 110+/-10N, unless otherwise defined in the drawing. We recommend doing the tightening perpendicular to the bundle.
Figure 14 – comparison of tightening methods.



The figure 14 Comparison of tightening methods

Automatic assembly

If the offer has not explicit agreement to use a part for automatic assembly, please let us know. Figure 15 is the mark in the drawing.

Vor Auslegung einer automatisierten Verarbeitung des Teils sollte Ruecksprache mit Fa. A.Raymond gehalten werden.
Fully automatic processing of the part requires prior consultation with A.Raymond GmbH.

The figure 15 Mark in the drawing

Metal parts

According to a technology of manufacturing and the shape of metal parts, conditions with parts sticking and mixed with similar parts cannot be prevented 100% (see figure 16).

Due to the manufacturing technology and necessary additional operations (see process diagram), PPM 250 is set for metal parts, this PPM index corresponds to the number of non-compliant products delivered within six (6) months from the start of serial production.



The figure 16 parts stuck together