DISTRIBUTOR ASSEMBLY AND INSPECTION MANUAL

VG 95328 Part number

N° MA 851-013



DATE: October 2nd, 2026
REVISION: C

NOT EXPORT CONTROLLED

REV	DATE	DESCRIPTION OF CHANGES	APPROVALS/DATE	
			PRODUCTION CONTROL	CHECKED BY
A	October 2nd 2024	Creation	C LEMARIE 	P. SANGLEBOEUF 
B	February 16th, 2026	- Addition of a note to suggest wearing gloves when handling parts with cadmium plating - The allowed videojet inks are now listed in a separate document, INK-001.	C LEMARIE 	N. TURMEAU 
C	October 2nd , 2026	Appendix III: Add new process of glue preparation, ECCOBOND 45LV & 15LV can delivered in a 2 components sachet, P/N CO5014 Change of color Eccobond 45LV, CO5005 : the color is changed from red to black.	C LEMARIE 	N. TURMEAU 

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This manufacturing and station layout is applicable to connectors, according VG95328 part numbering.

Process change request

The operations and tooling specified in this manual will be the only approved and qualified method of assembly SOURIAU connectors according VG95328 part numbering connectors, any deviations in the method of assembly and inspection, or alternate tooling must be submitted and approved by the assurance quality department, SOURIAU, 89 route de St Hubert, 72470 Champagné – France.

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PRODUCTION STEP

Note 1: After the end of each operation, you must fill the traveler before passing to another operation (write down quantities, accepted or rejected pieces, date and visa).

Note 2: To avoid any risk of confusing parts, it shall be used separate trays on each workstation. One tray for worked parts and one tray for unworked parts.

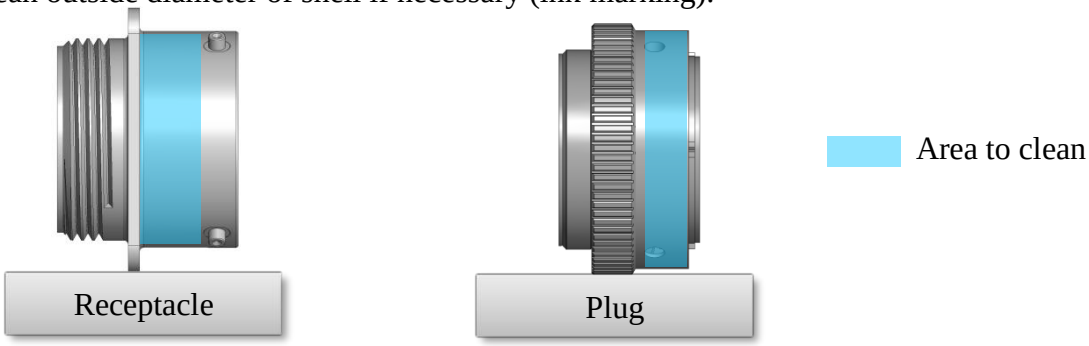
Note 3: We suggest wearing gloves when handling parts with cadmium plating

OP 10: KITTING

Inspect that no components are missing regarding the bill of material.
Check that components have no defects.

OP 20: CLEANING

Clean outside diameter of shell if necessary (ink marking).



Let the connector dry for 10 minutes especially if you use the videojet diluent.

OP 30: MARKING

Mark part number with black ink, or laser. Laser marking allowed only with SOURIAU approval. Refer to *Appendix IV* for details on position and marking. Refer to *Appendix VI* for ink references.

A. Write down date and lot code on traveller.
B. Mark part identification as specified on work order and date code, SOURIAU name, VAD logo/mint mark and connector P/N on connector.

OP 40: MARKING INSPECTION

Control rate for P/N marking is 100%. Points to check:

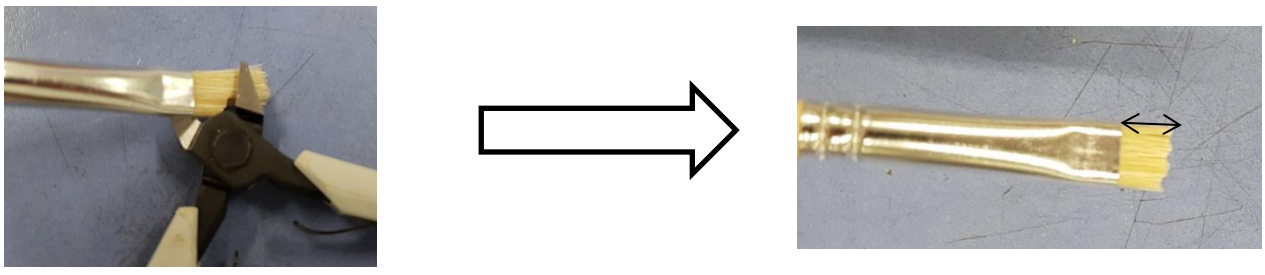
- Date code
- Right part reference
- Good legibility

OP 50: CURING

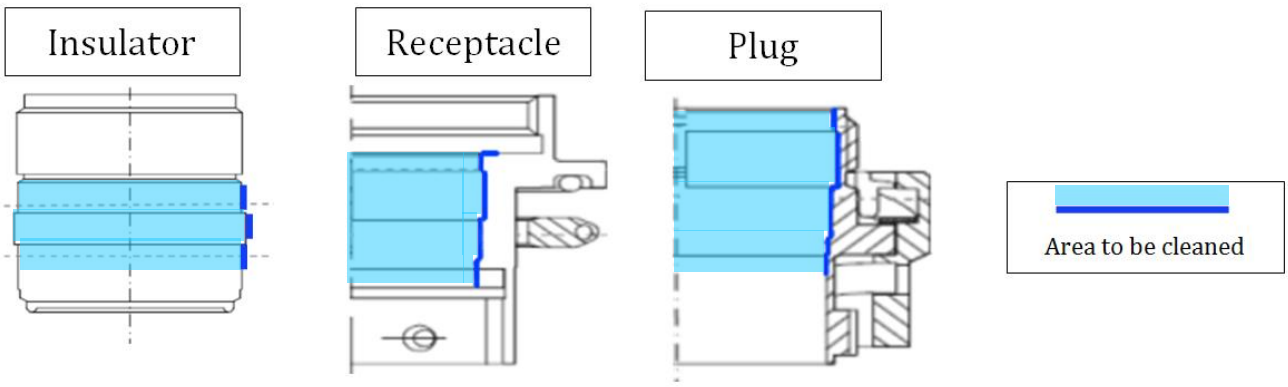
Cure 2 hours at 150° ±10°C (300°F ±18°F).

OP 60: CLEANING

With solvent and paint brush/cotton tip, clean rear internal diameter by turning twice into the shell.
Clean the external diameter insulator with a cut paint brush: cut the bristles of the brush to make it 4-8 mm long = between 0.15 to 0.30 inch.



The solvent Methyl Ethyl Ketone (MEK) should be handled in a fume hood using appropriate precautions and personal protective equipment in according to safety data sheet.
Clean shell rear inside diameter and the outside diameter of the grommet. See below Area to be cleaned highlighted in blue.



Use alcohol is forbidden

OP 70: GLUING

Note: ECCOBOND 104 and ECCOBOND 104 MOD 2 are not allowed.

Mix **thoroughly ECCOBOND 45 LV & 15LV adhesive** (See *Appendix III*):

a) Hold syringe at a 45° angle during filling to allow air to escape.
Fill slowly to ensure that air bubbles are not created.

b) Secure syringe to applicator.



c) Attach needle:

	Shell size	
	8 to 20	22 & 24
Steel needle	Flat green	Flat brown

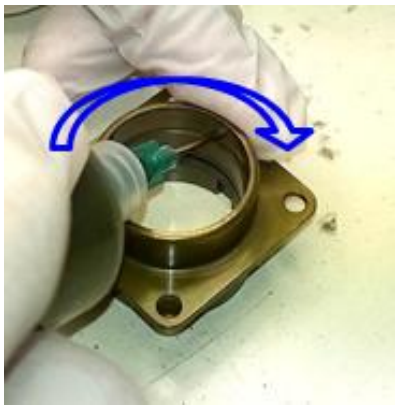




The glue shall be applied homogeneously with no interruption in the rear groove as shown on the picture below.

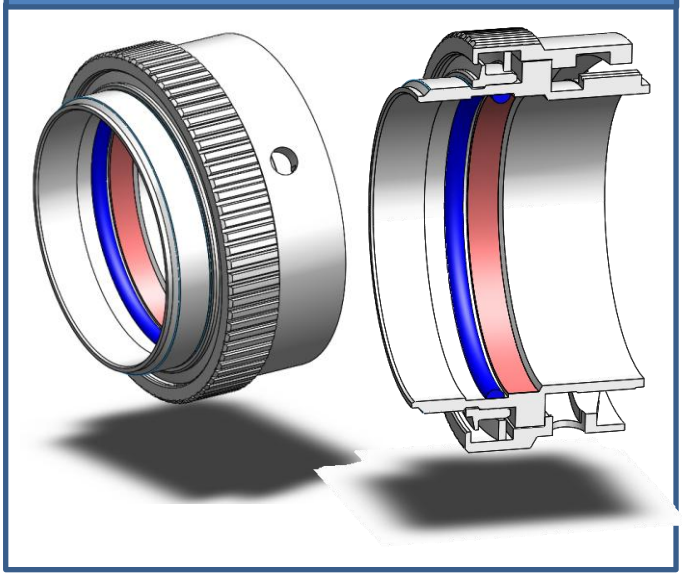
Put the shell on a flat surface and turn in the same way than the pictures:



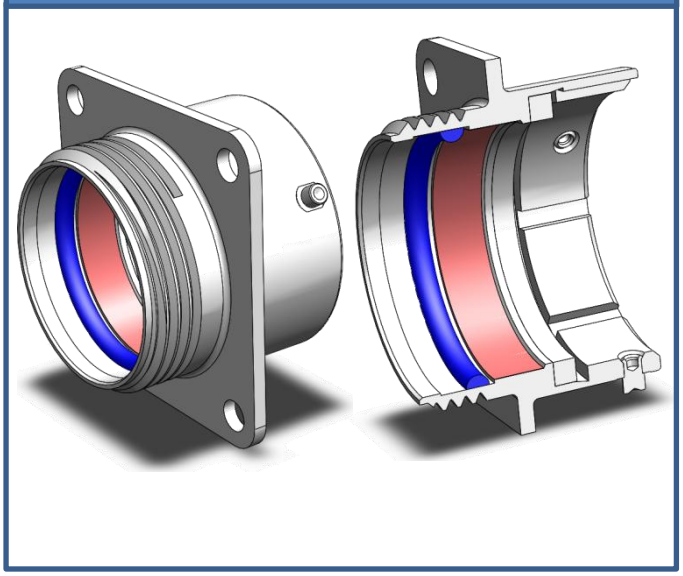


The ring of glue must be located as shown on the picture below (between the middle and the bottom of the groove).
Blue ring = bead of glue
Red ring = area free of glue

Plug



Receptacle



OP 80: GLUE INSPECTION

Good amount of glue



Excess glue



Discontinuous and too thin



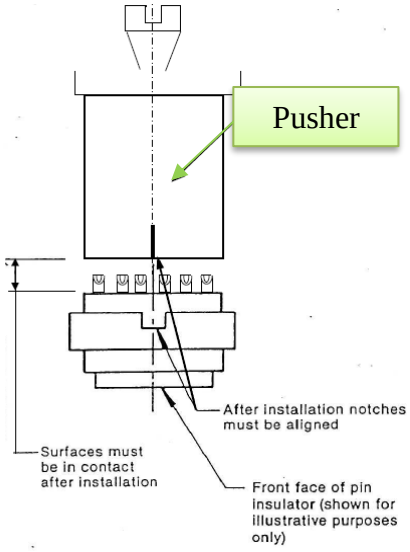
Notes: A magnifier with circular light integrated can be used to help filling the glue.

OP 90: INSERT ASSEMBLY

Setup the tools on the press (see *Appendix I*).

Place insulator into pusher of insulator installing machine as shown in figure 1.

Figure 1



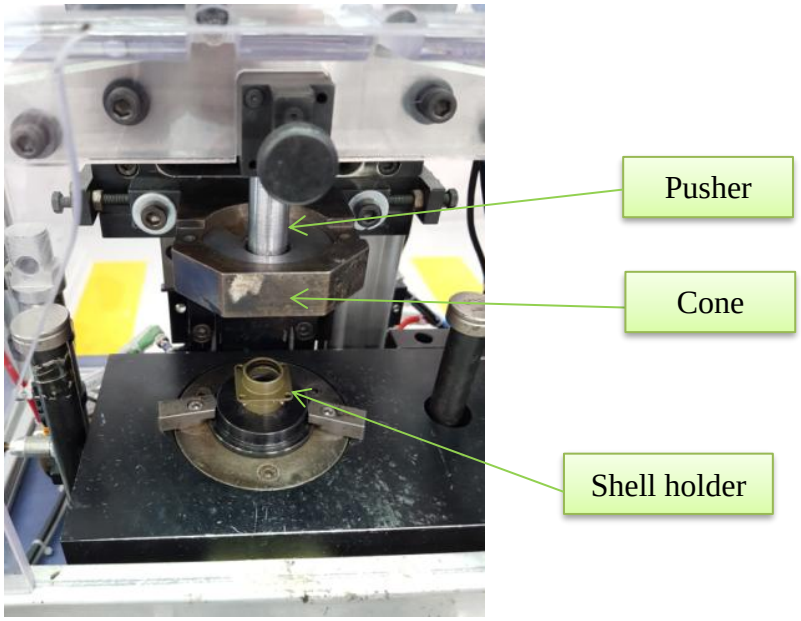
On the pneumatic insulator installing machine (figure 2):

1) Position the receptacle or plug body on its mechanical holder.
2) Position your insert, then lower the press using the pneumatic system. Press both yellow buttons simultaneously.

Caution: keep actuating area of installing machine free of hands, tools and other foreign objects.

3) Release both buttons after a full downward stoke ok the machine has been completed.

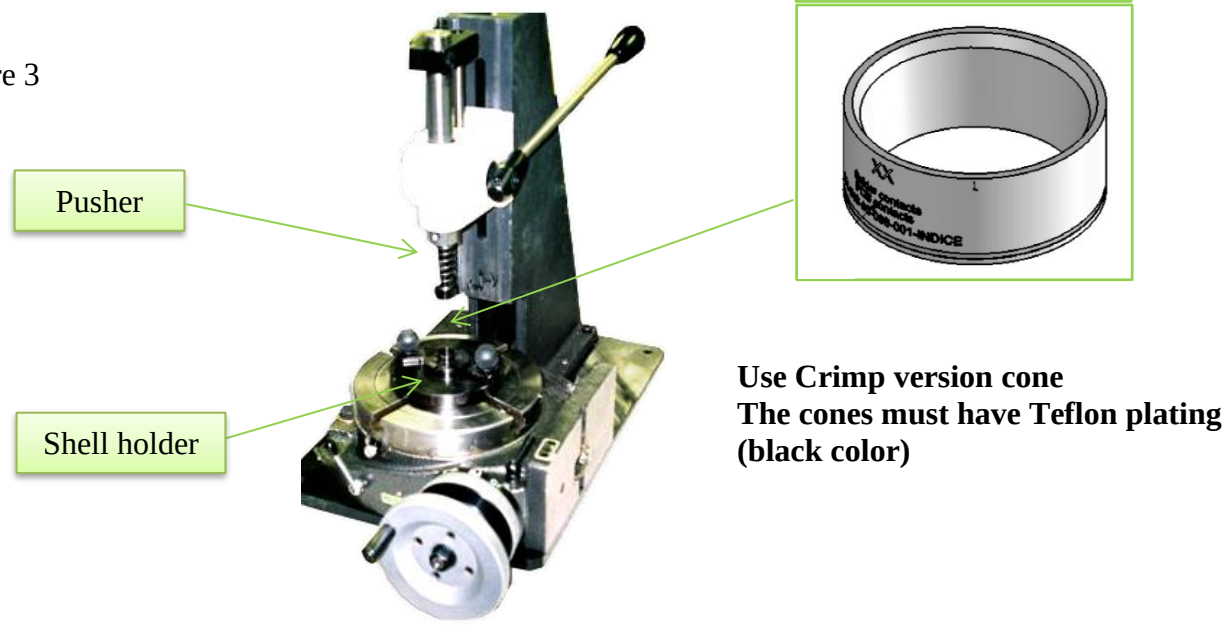
Figure 2



On the manual insulator installing machine (figure 3):

1) Position the receptacle or plug body on its mechanical holder.
2) Position the cone and the insert.
3) Put the correct conus on the shell and assemble the insulator into the shell by rotate the handle.
4) Release the handle after having reached the bottom with the pusher.

Figure 3



Use Crimp version cone
The cones must have Teflon plating (black color)

OP 100: DEPTH INSPECTION

Check the longitudinal dimension between insulator and shell.

See table and scheme below for right dimensions:

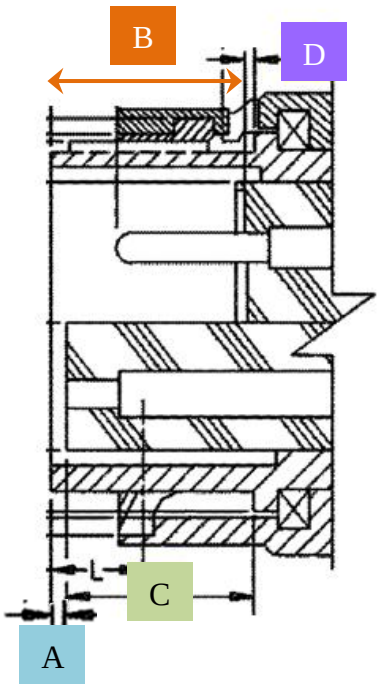
NOTA :
Male = Pin
Female = Socket

Table A

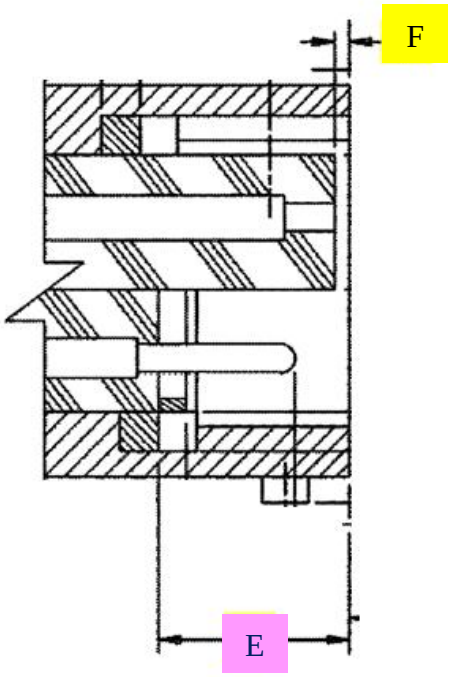
All dimensions are shown in inches/millimeters

Shell size		PLUG				RECEPTACLE		
		Socket	Pin	Socket	Pin		Pin	Socket
		A	B	C	D		E	F
8 to 18	Mini	0.0055/0.14	0.32/8.08	0.337/8.56	0.030/0.76	Mini	0.312/7.92	0.005/0.13
	Maxi	0.0217/0.54	0.35/8.83	0.357/9.07	0.050/1.27	Maxi	0.332/8.43	0.025/0.64
20 to 24	Mini	0.0062/0.16	0.32/8.08	0.399/10.13	0.092/2.34	Mini	0.374/9.50	0.067/1.70
	Maxi	0.0225/0.57	0.35/8.83	0.419/10.64	0.112/2.84	Maxi	0.394/10.01	0.087/2.21

PLUG



RECEPTACLE



If unable to obtain specified longitudinal dimension(s) additional installing adjustment may be required.

If dimensions are not within the specified limits adjust the insulator position using an arbor press (see figure 3)

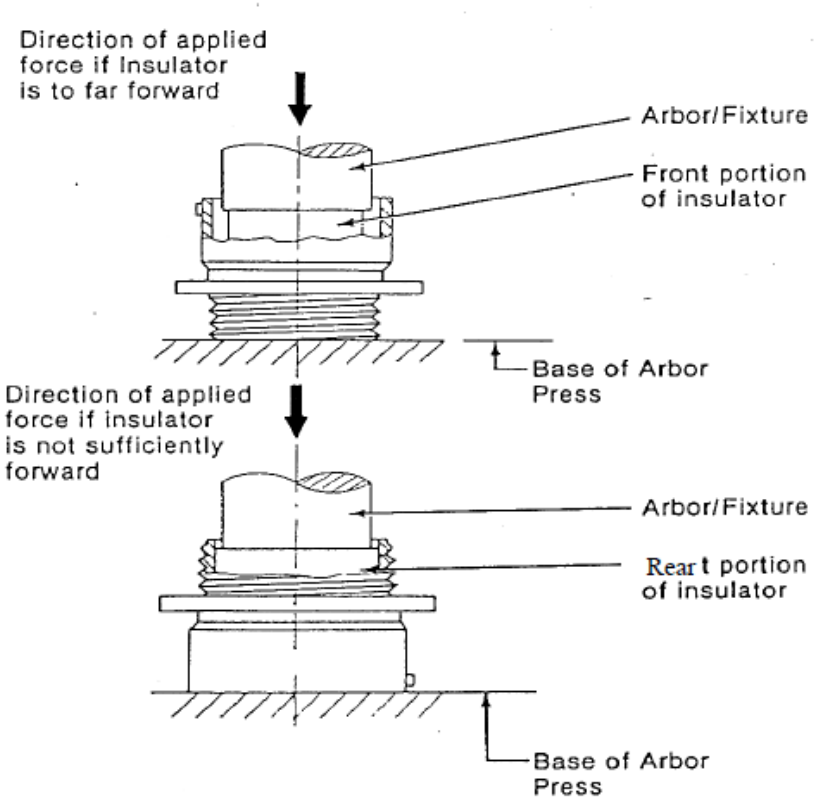


Figure 3

Insert depth control rate:

For VAD that have a monthly production volume less or equal to 3000:

- Control rate is 100%

For VAD that have a monthly production volume bigger than 3000:

- 3 first pieces + 3 pieces in middle + 3 last pieces.
- If at least one piece fails, the test then controls all pieces at 100%.

OP 110: ANGULAR INSPECTION

Control rate:

On each series: 2 first pieces + 2 last pieces + 1 piece every 10 pieces.

Example: for a series of 26 connectors: 2 pieces at the beginning + 2 pieces at the end + 2 pieces in middle = 6 connectors with angular inspection.

For all other connectors of series, check visually **100%** the insert angle.

Process:

Use the same system specified in operations and or as an option with the insulator angle deviation inspection machine as below. See figure 4 for more details.

Select a plastic indicator regarding the shell size and connector holding plate regarding the insulator orientation. Insert the plastic indicator and then the connector holding plate from the rear of the machine. Be sure the slots of both pieces match with the protrusion. Put the connector in the connector holding plate from the rear. Align visually the red index lines of the plastic indicator by rotating the angle wheel through the centre of the insulator contact holes headed by the hole marked “A”. Use magnifier with light to increase accuracy for angle position. See figure 4 for scheme.
Read the deviation angle from the “0” graduation to the zero-index line.
See next table A for-angle tolerance:

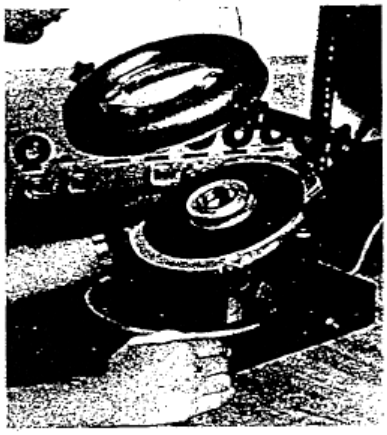
TABLE A - Angular orientation

LAYOUT		PIN INSULATOR					SOCKET INSULATOR				
		N	W	X	Y	Z	N	W	X	Y	Z
8	2	0	58	122			0	302	238		
	3	0	60	210			0	300	150		
	3A/98*	0	60	210			0	300	150		
	4	0	45				0	315			
	33	0	90				0	270			
10	6	0	90				0	270			
	7*	0	90				0	270			
	98	0	90	180	240	270	0	270	180	120	90
12	3	0			180		0			180	
	4	0									
	8	0	90	112	203	292	0	270	248	157	68
	10	0	60	155	270	295	0	300	205	90	65
	2	0					0				
	14*	0	45				0	315			
14	5	0	40	92	184	273	0	320	268	176	87
	7	0									
	12	0	43	90			0	317	270		
	15	0	17	110	155	234	0	343	250	205	126
	18	0	15	90	180	270	0	345	270	180	90
	19	0	30	165	315		0	330	195	45	
16	8	0	54	152	180	331	0	306	208	180	29
	23	0	158	270			0	202	90		
	26	0	60	120	275	338	0	300	240	85	22
18	11	0	62	119	241	340	0	298	241	119	20
	32	0	85	138	222	265	0	275	222	138	95
	30	0	180	193	285	350	0	180	167	75	10
20	16	0	238	318	333	347	0	122	42	27	13
	39	0	63	144	252	333	0	297	216	108	27
	41	0	45	126	225		0	315	234	135	
	24	0	70	145	215	290	0	290	215	145	70
	25	0	72	144	216	288	0	288	216	144	72
	27	0	72	144	216	288	0	288	216	144	72
22	21	0	16	135	175	349	0	344	225	185	11
	36	0	72	144	216	288	0	288	216	144	72
	55	0	30	142	226	314	0	330	218	134	46
	32	0	72	145	215	288	0	288	215	145	72
	34	0	62	142	218	298	0	298	218	142	62
24	61	0	90	180	270	324	0	270	180	90	36

Shell size	Angle tolerance	Shell size	Angle tolerance
8	±3°	14 to 18	±1°30’
10	± 2°30’	20 to 24	±1°
12	±2°		

Not in MIL-STD-1669

* Arrangement 8-98 : positionnements W et X non normalisés / 8-98 layout, W and X non standard ortientations
Arrangements 10-7 & 12-14 : positionnement W non normalisé / 10-7 & 12-14 layouts, W non standard orientation



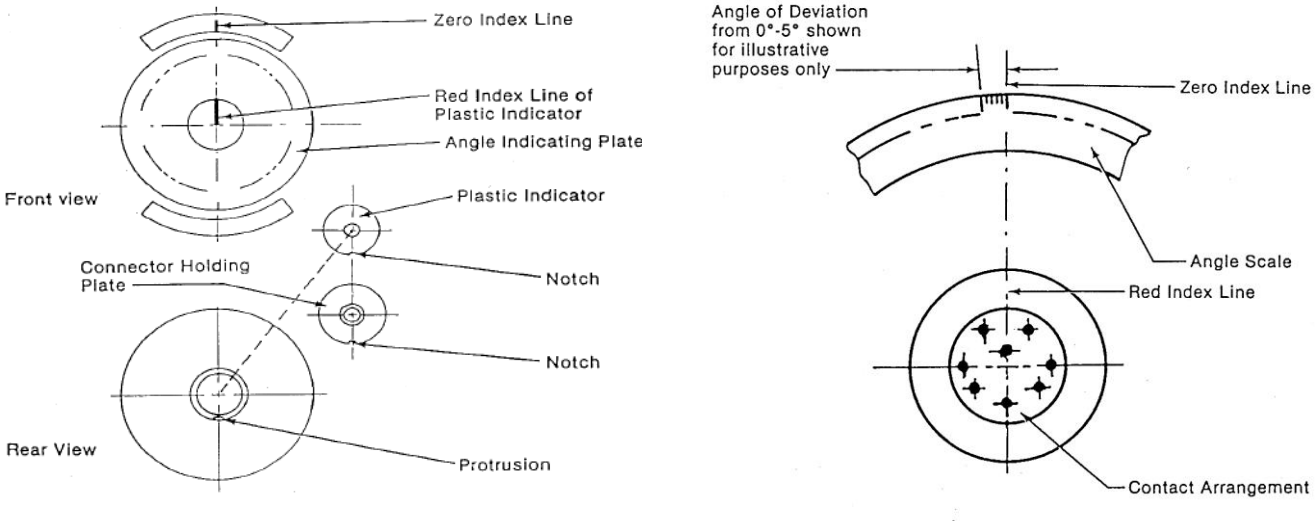

Zero Index Line
Red Index Line of Plastic Indicator
Angle Indicating Plate
Front view
Plastic Indicator
Connector Holding Plate
Notch
Notch
Rear View
Protrusion
Angle of Deviation from 0°-5° shown for illustrative purposes only
Zero Index Line
Angle Scale
Red Index Line
Contact Arrangement

Figure 4

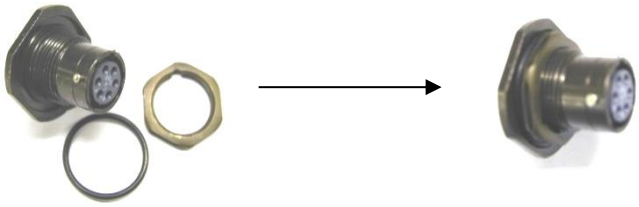
OP 120: CURING

Stabilization: 6h min, ambient temperature

Cure 4 hours at 120° ±10°C (248°F ±18°F)

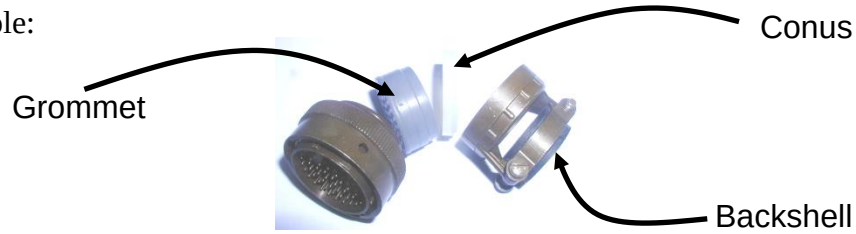
OP 170: PACKAGING

For receptacle type 07 only: Assemble the seal and the nut:



Install grommet and backshell hardware as applicable.
Assemble the first connector with accessory than put accessory in the bag.

Exemple:



Install plastic dust cover to mating end of connector and identification tag into a bag. Do not seal polyethylene bag.

See example of label:

Name and address of distributors

Cust P.O # _____
Cust. P/N _____
MFG. P/N _____
Qty _____ Date _____ Lot _____

Crimp contact type:

Packaging: Place the contacts in a box

OP 180: FINAL INSPECTION

Final inspections examine for:

A. Part identification on part, work order and bag
B. Angular position of insert with transparencies
C. Presence of all items required
D. Complete log entries on work order and check traveler is filled right (date/lot code, insert and shell lot identifier, work order no, work order qty and cure times in and out).
E. Inspect packaging
F. Check absence on glue on contact

OP 190: FINAL PACKAGING

Seal bag and forward to stores area.

APPENDIX I - PNEUMATIC INSULATOR INSTALLING MACHINE SETUP

Set up tooling on press

- Install appropriate pusher into press nozzle
- Install appropriate shell holder on press base
- Select appropriate cone
- Adjust insulator orientation according position letter of connector P/N and table page 5.

PNEUMATIC INSULATOR INSTALLING MACHINE SET UP

1) Install pusher with layout identification facing operator as specified below, and secure by tightening screw with Allen wrench.

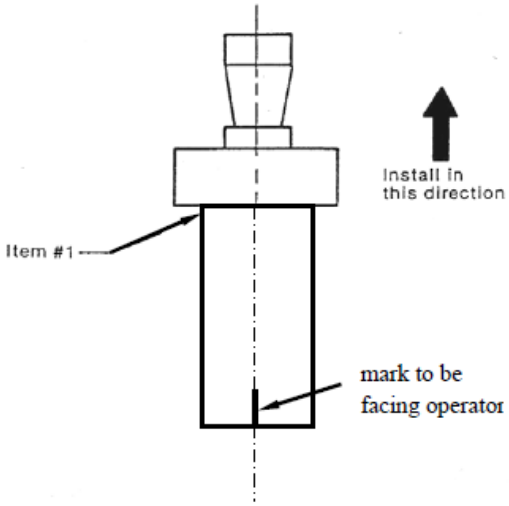


Figure 1

2) Adjust stroke and air pressure (approximately 3 bar/45PSI) until item 1 protrudes approximately 1/8 inch below surface of plate (item 2), see figure 2. Height adjustment may be accomplished when necessary by turning height adjusting nut of figure 3. Clockwise rotation reduces 1/8 inch dimension and counterclockwise rotation increases 1/8 inch dimension. Prevent rotation of air cylinder ram during adjustment by placing a rod in the hole provided in the ram and holding in position.

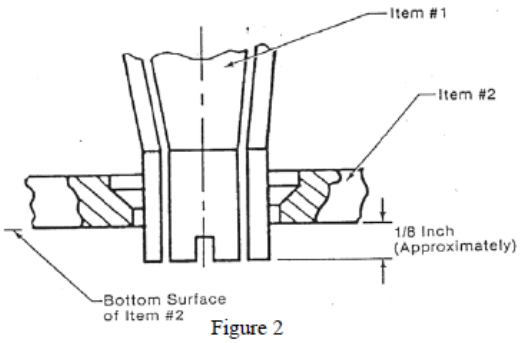


Figure 2

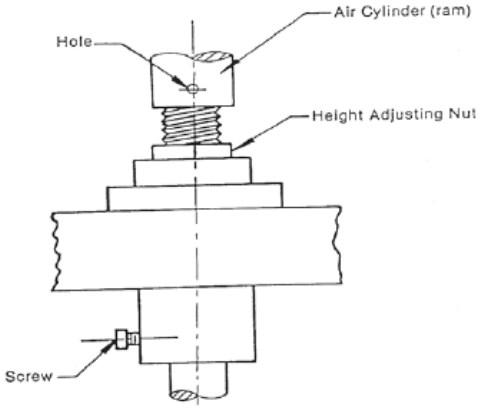
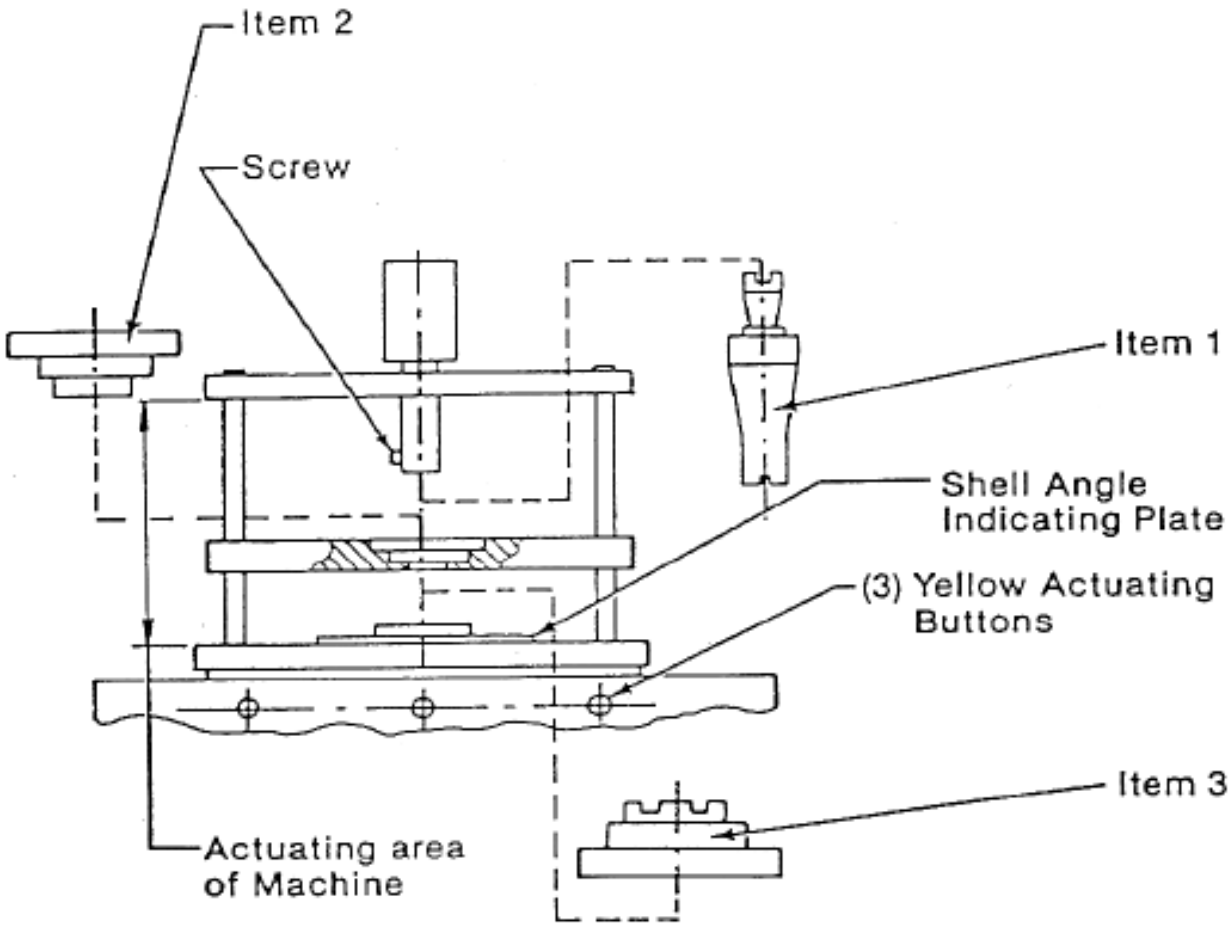


Figure 3

3) Set the shell angle indicating plate of the pneumatic insulator installing machine per the insulator orientation letter designation specified by the work-order and TABLE A of assembly manual page 5. Depress and hold the yellow center button to release this shell angle plate brake (releasing the yellow center button actuates the brake).

PNEUMATIC INSULATOR INSTALLING MACHINE



Pneumatic Insulator Installing Machine
FIGURE 9

APPENDIX II - ASSEMBLY AND INSPECTION TRAVELER

(Recommended use)

Connector Assembly MIL-DTL-26482 SERIES I & 851	Insert Lot N° : Shell Lot N° : Contact Lot N° :	Date Code : Work Order N° : Work Order Qty :
Part Number :		

OPER.	DEPT	OPERATION DESCRIPTION	Accepted	Rejected	Date	Visa
10	MFG	Take components out from storage and write down lot numbers on traveler head. Check that no components is missing regarding Bill Of Material. Date of coating for contacts: _____				
20	MFG	Clean marking area on shell outside with solvent (or VIDEOJET make-up if applicable).				
30	MFG	Mark part number with black ink, white ink (for Black Zinc Nickel) or laser. *Laser marking allowed only with SOURIAU approval.*				
40	INSP	Inspect marking (date code, part reference and legibility).				
50	MFG	Cure parts for 2 hours at 150° ±10°C (300°F ± 18°F) Time in: _____ Time out: _____				
60	MFG	Clean with solvent outside diameter of insulator and inside diameter of shell.				
70	MFG	Time of mixture: _____:_____ Apply glue inside the shell. Tooling: syringe + green or brown flat needle. Glue: ECCOBOND 45 LV + 15LV.				
80	INSP	Inspect amount and location of glue.				
90	MFG	Install insert into shell with press.				
100	INSP	Inspect depth of insulator. Control rate: 100% for production volume <3000.				
110	INSP	Inspect angular location of insulator. Control rate: 2 first pcs+ 2 last pcs + 1 piece every 10 pcs				
120	MFG	Stabilization: 6 hours Time in: _____ Time out: _____ Cure parts for 4 hours at 120° ±10°C (248°F ±18°F) Time in: _____ Time out: _____				
170	MFG	Do packaging for connector & accessories.				
180	INSP	Do final inspection.				
190	MFG	Seal bag and forward to store area.				

APPENDIX III - PREPARATION OF ECCOBOND 45 LV ADHESIVE

PREPARATION OF ECCOBOND 45 LV & 15LV ADHESIVE



Wearing gloves is mandatory when preparing the adhesive.

A) Preparation and mixing of pre-dosed two-components adhesive sachets

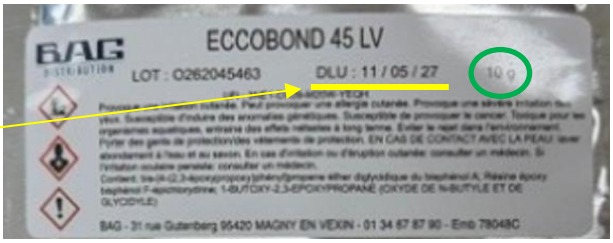
1) Verify the mixing ratio and quantity specified on the sachet.

For VG connectors, the glue with Souriau part number **CO5014** with the mix ratio 1/1 is appropriate.

Reference	Mixing Ratio	Total Quantity	15LV	45LV
CO5014	1:1	20 g	10 g	10 g

2) Check the expiry date.







Verify the expiry date indicated on the sachet ❌ *If the date has passed, the product is lost.*

3) Prepare the Adhesive Sachet

1 Remove the retaining clips



2 Remove the separator rod



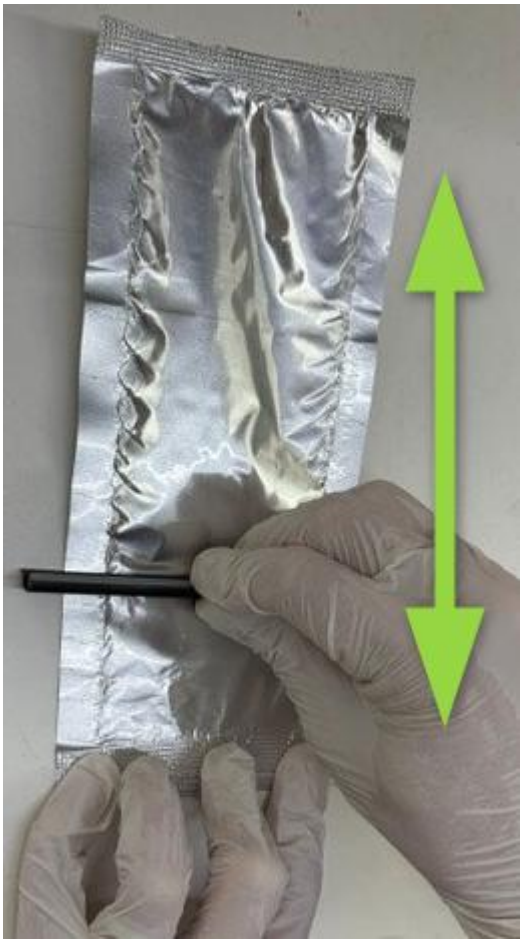
3 Remove the sealing clamp

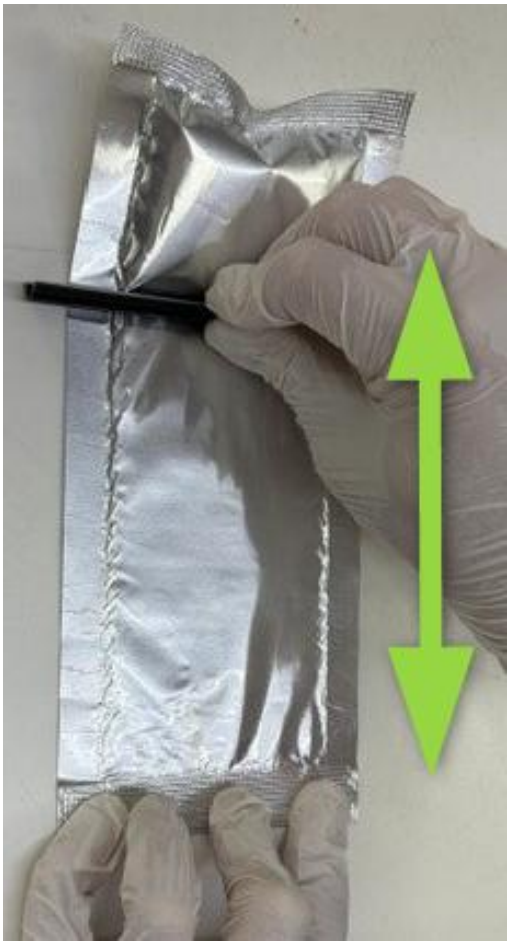


Ensure that both components are free to mix inside the sachet.

4) Premix the adhesive

Use the separator rod to mix the two components inside the sachet until a uniform and consistency mix is obtained.
Knead and mix the contents by repeatedly moving the rod back and forth through the sachet.
Do not puncture or damage the sachet during mixing.





✅ **Use the separator rod to mix the components**

5) Empty the sachet

Cut a corner



Transfer the content of the sachet into an aluminum cup.



Roll the sachet from opposite end to force out as much material as possible



Extract the maximum amount of adhesive from the sachet



6) Final mixing

Mix the adhesive by thoroughly scraping the sides and bottom of the container to obtain a homogeneous and uniform mixture.

Manual mixing: mix for **10 minutes**.
Planetary mixer: Mix for **3 minutes**.



✅ **Final Mixing**



❌ non-homogeneous mixture, presence of granules

7) Syringe preparation

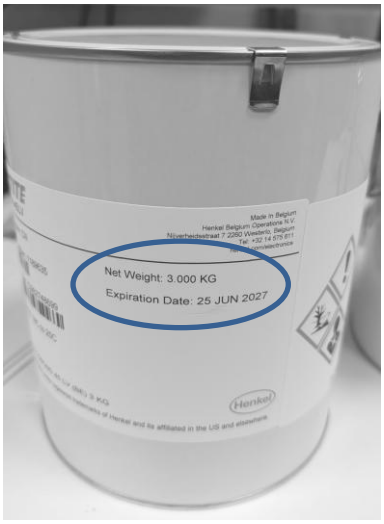


Fill the syringe with the prepare adhesive.
Apply an identification label to the syringe, with date and time the mixture was prepared.

✅ **Use the adhesive within the allowable working life indicated on the label.**

The adhesive pot life is 90 minutes maximum from the start of mixing

B) **Mixing pot**



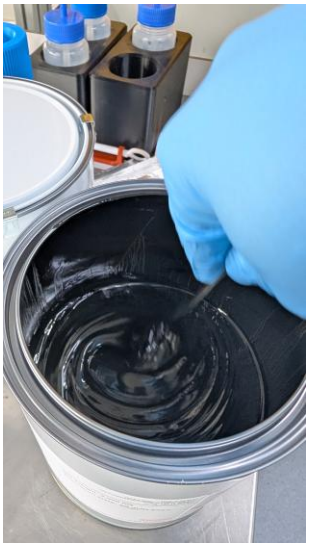
Check the expiration date on the pots.

Verify the expiry date indicated on the sachet

❌ *If the date has passed, the product is lost.*

Before dispensing, thoroughly stir the contents of both containers until all fillers are evenly distributed.

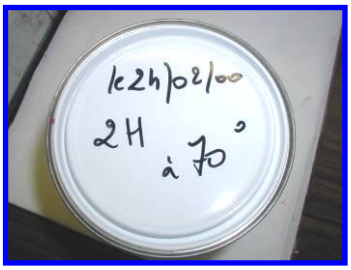
- ECCOBOND® 45LV - Souriau P/N = CO5005
- ECCOBOND® 15LV - Souriau P/N = CO5004



Ensure a uniform consistency is obtained before weighing or mixing

If the ECCOBOND® 45LV container is new and has never been opened:

- Place it in an oven at **70 °C (+0°C / -10°C) for 2 hours**.
- Record the oven entry date on the container lid.

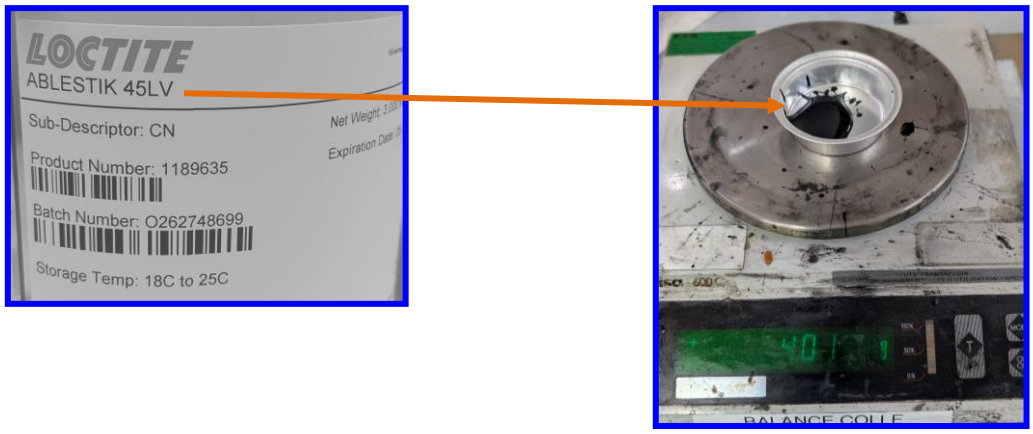


Both components are black. Take extra care to identify

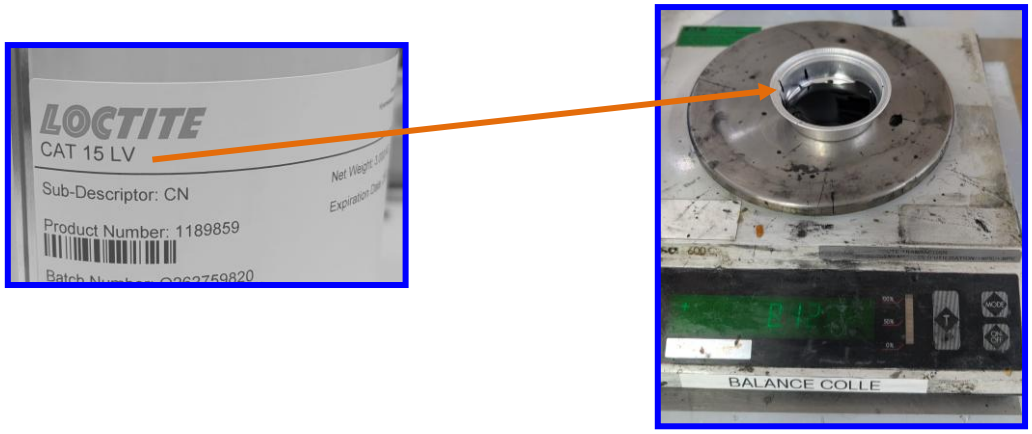
Dispense the required quantity of ECCOBOND® 45LV into an aluminum mixing cup.
Appropriate ratio for VG Connectors : **ratio 1/1**

Quantity:
1 gram (by weight) of Eccobond #45LV* (black) - Souriau P/N CO5005
1 gram (by weight) of Eccobond # 15LV* (black) - Souriau P/N CO5004

Start the mixing process by placing the ECCOBOND 45LV into the cup.

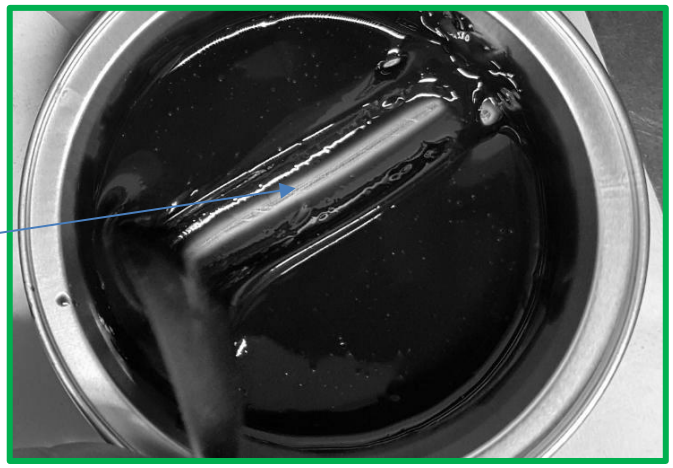


Add the 15LV according to the required quantity.



Manual mixing: mix for **10 minutes**.
Planetary mixer: Mix for **3 minutes**.

The mix consistency must be regular



The adhesive pot life is 90 minutes maximum from the start of mixing.

Record the time the mixture was prepared on the work order.



APPENDIX IV - MARKING

Example: Date code Distributor logo P/N

9945 SOURIAU □□□ VG 95628 A 12-10 PN

Note: For small sizes 8, 10, 12: mark “SOU” instead of “SOURIAU”.

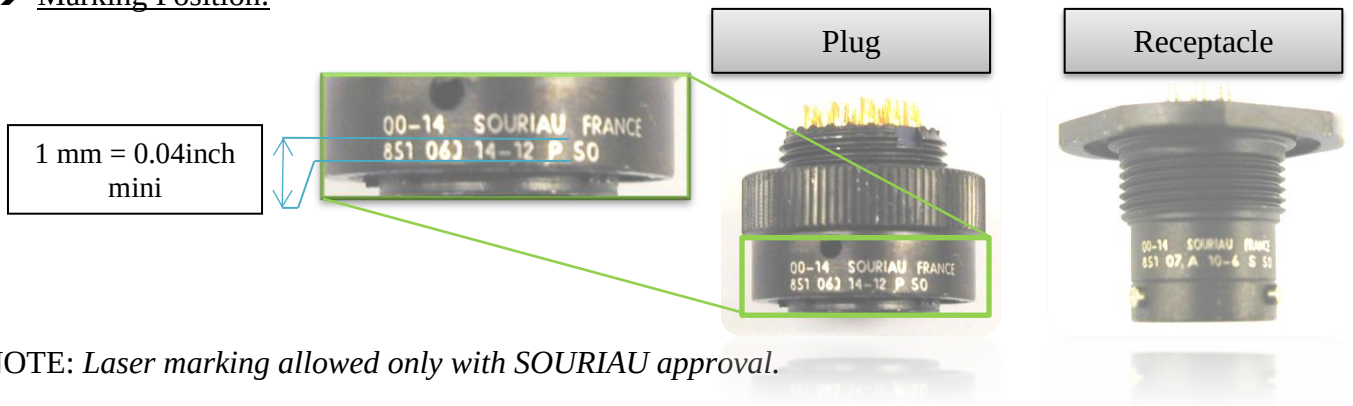
➔ Detail on part number (P/N): Space - Dash

VG95328T83APX➔ VG 95328 T 8-3A PN
VG95328T83APXJ➔ VG 95328 T 8-3A PNJ

➔ A single digit shell size and/or insert arrangement shall be marked with a single digit.
(Example: shell size 8 shall be marked “8” not “08”).

Example: Marking must be “**VG 95628 A 16-8 PW**”.
Example: Marking must be “**VG 95628 A 14-5 PX**”.
Example: Marking must be “**VG 95628 A 8-3A PN**”.

➔ Marking Position:



NOTE: *Laser marking allowed only with SOURIAU approval.*

VG part numbering – Cadmium plating

VG95328T83APX→ VG 95328 T 8-3A PN Space - Dash

VG95328	W	16	8	P	N
	Body and backshell style				
	A	*Shell size*			
	B	8	*Layout*		
	C	10		*Gender*	
	D	12		P	*Position*
	E	14		N	N
	F	16			X
	G	18			Y
	H	20			Z
	J	22			
	K	24			
	M				
	R				
	S				
	T				

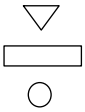
VG part numbering – Tin-Zinc plating

VG95328T83APXJ→ VG 95328 T 8-3A PNJ Space - Dash

VG95328	W	16	-	8	P	N	J
	Body and backshell style						
	A	*Shell size*					
			(dash)				
	B	8		*Layout*			
	C	10			*Gender*		
	D	12			P	*Position*	
	E	14			N	N	*Suffix*
	F	16				*X*	*(Tin Zinc)*
	G	18				X	
	H	20				Y	
	J	22				Z	
	K	24					
	M						
	P						
	R						
	S						
	T						
	U						
	V						
	W						

APPENDIX V - PROCESS FLOW CHART

PROCESS FLOW CHART ACORDING TO SOURIAU DISTRIBUTOR ASSEMBLY MANUEL



Storage
inspection
Operation

Operation Number	Description	page
10	KITTING	5
20	CLEANING	5
30	MARKING	5
40	MARKING INSPECTION	6
50	CURING	6
60	CLEANING	6
70	GLUING	7
80	GLUE INSPECTION	8
90	INSERT ASSEMBLY	9
100	DEPTH INSPECTION	11
110	ANGULAR INSPECTION	13
120	CURING	16
170	PACKAGING	16
180	FINAL INSPECTION	17
190	FINAL PACKAGING	17

APPENDIX VI – CONSUMABLES LIST

OPERATION	MANUFACTURER – P/N - DESCRITPION	SHELF LIFE (in months)
VIDEOJET Marking	See manual INK-001 for the list of allowed inks and make-up	**12 for ink** at 2-35°C (35.6-95°F) **24 for make-up** at 2-35°C (35.6-95°F)
GLUING OF INSULATOR IN SHELL	ECCOBOND 45LV (black) (ref SOURIAU: CO5005) CAT 15LV (black) (ref SOURIAU: CO5004) 1 pre-dosed two-components adhesive sachet (ref SOURIAU: CO5014)	**12** At room temp. **See expiry date on sachet** At room temp.

1) Shelf life must be considered from either manufacturing date or expiration date. This information is given on the manufacturer's label on packaging.

2) For any product, the chemical cannot be used once the expiration date is expired.

3) It is not possible to freeze the non-mixed glue components, or the mixed glue.