aerospatiale
TECHNICAL MANAGEMENT
STANDARDS DEPT.

«HUCK MLS 100° BLIND RIVETS - 100° C'S'K' HEAD - ALUMINIUM ALLOY

GENERAL DESIGN MANUAL

ASN-A 0028

NOT USED FOR NEW DESIGNS - SEE MAS 1921 -

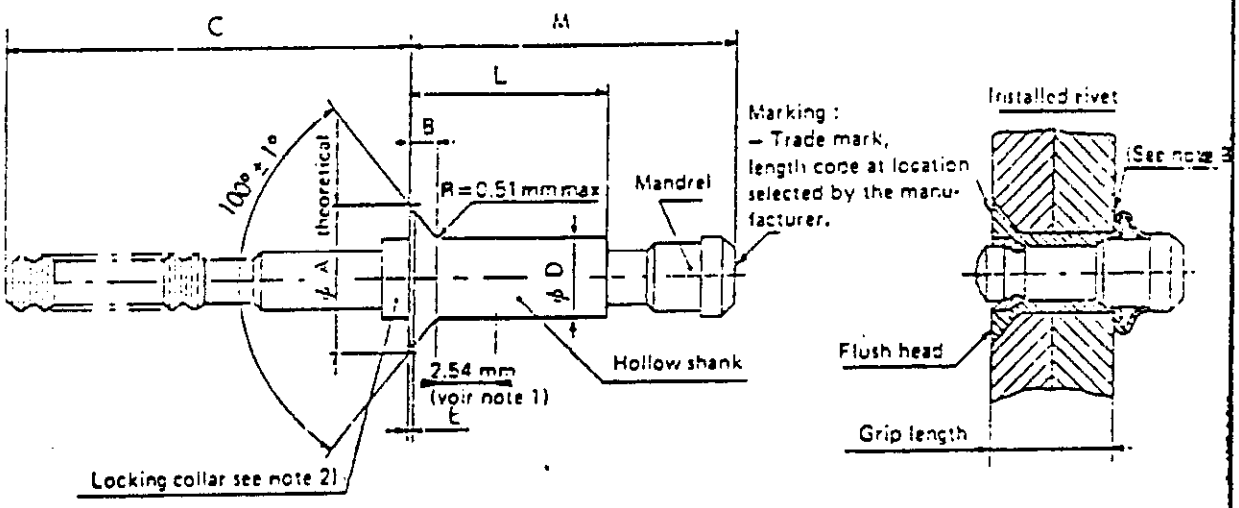
- This document complies with the rules defined in ASN 000.06 and may have been subjected to particular selections.
- Where no particular selection is specified, it is applicable without restriction.

This document is based on HUCK Co, document and Standard ASN 542-16 and supersedes the latter.

Dimensions in inches and in millimetres

SUMMARY

1 – DESCRIPTION



NOTES – *1) Over this length, the diameter of the hollow shank may exceed the maximum «D» diameter by 0.025 mm.*
2) Locking collar to be in one piece or split. It may be separated or integral part of the hollow shank, to the manufacturer's discretion.
3) These rivets may be installed on non-parallel or curved faces. The permissibles tolerances are given in ASN-A0025.

2 – CODED REFERENCE – *The coded reference of these rivets consists of the basic reference* 54216 *followed by*
- *the diameter code (see table of paragraph 3),*
- *the length code, depending on the grip length (see table of paragraph 5).*

Example of drawing call-out

Diameter : 4.76
Grip length : 11.12 to 12.70
Basic reference

00	AREA	ITEM	REFERENCE or PART N°	DESIGNATION	Shape	Dimensions	Type	NSA ASN NT	EM. Weight (g)
			54216-6-08	BLIND RIVET				A0028	1.1
					MATERIAL				

ISSUE		Supersedes ASN 542-16	Page 1/4
A 12.06.75	25.08.80		

3 – DIMENSIONS AND CHARACTERISTICS

Nominal diameter		Diameter code	A		B REF.		C min.		D		E +.004 +0.10 0 0		Installation hole diameter *		Min. breaking load N daN	
in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Shearing	Tensile
1/8	3,18	4	.229 .221	5,81 5,61	.042	1,07	.788	20,02	.128 .124	3,25 3,15	.002	0,05	.132 .129	3,35 3,28	2 202	1 446
5/32	3,97	5	.290 .282	7,36 7,16	.055	1,40			.159 .155	4,04 3,94			.164 .160	4,16 4,06	3 358	2 180
3/16	4,76	6	.357 .349	9,06 8,86	.070	1,78			.190 .186	4,82 4,73			.196 .192	4,98 4,87	4 848	3 180
1/4	6,35	8	.480 .472	12,19 11,99	.095	2,41	1.000	25,40	.253 .249	6,42 6,32			.261 .256	6,63 6,50	8 763	5 338

Diameter code	Length code	Weight of installed rivets (g)		HUCK * reference N°
		Related to length code	Supplement per length increment	
4	02	0,16	–	MLS100-B4
	03	0,19	0,03	
5	02	0,28	–	MLS100-B5
	03	0,34	0,06	
6	03	0,55	0,09	MLS100-B6
8	03	1,13	0,15	MLS100-B8

NOTES – *a) The strength values given are equal to or greater than those specified in documents AFS 40911 or NAS 1400. They correspond to installed rivets.*

b) The dimensions of the installation hole are in compliance with those given in documents MS 33522 (type II) and NAS 1900.

Recommended limit temperature : + 120°C, to be justified by tests carried out under operating conditions.

4 – MATERIALS - PROTECTIVE TREATMENT

Component	MATERIAL	PROTECTIVE TREATMENT
Hollow shank and locking collar	*Aluminium alloy 5056, stabilized*	*None*
Mandrel	*Aluminium alloy 2024, naturally aged*	*Chemical surface treatment (MIL-C-5541) or anodizing (MIL-A-8625)*

* To be followed by length code

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5 – RIVET LENGTH CODES VERSUS DIAMETERS AND GRIP LENGTH

Length code	Grip length		Diameter code													
			4				5				6				7			
			L max.		M max.		L max.		M max.		L max.		M max.		L max.		M max.	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
02	el .125	el 3,17	.260	6,60	.391	9,93	.263	6,68	.446	11,33								
03	.126 .187	3,20 4,75	.373	8,20	.516	13,10	.326	8,28	.541	13,74	.350	8,89	.571	14,50	.427	10,84	.637	16,18
04	.188 .250	4,78 6,35	.385	9,78	.641	16,28	.388	9,85	.666	16,91	.412	10,46	.696	17,68	.460	11,68	.762	19,35
05	.251 .312	6,38 7,92	.448	11,38	.766	19,45	.451	11,45	.791	20,09	.475	12,06	.821	20,85	.522	13,26	.887	22,53
06	.313 .375	7,95 9,52	.510	12,95	.891	22,63	.513	13,03	.916	23,26	.537	13,64	.946	24,03	.585	14,86	1.012	25,70
07	.376 .437	9,55 11,10					.576	14,63	1.041	26,44	.600	15,24	1.071	27,20	.647	16,43	1.137	28,88
08	.438 .500	11,12 12,70					.638	16,20	1.166	29,61	.662	16,81	1.196	30,38	.710	18,03	1.262	32,05
09	.501 .562	12,72 14,27									.725	18,41	1.321	33,55	.772	19,61	1.387	35,23
10	.563 .625	14,30 15,87									.787	19,99	1.446	36,73	.835	21,21	1.512	38,40
11	.626 .687	15,90 17,45									.850	21,59	1.571	39,90	.897	22,78	1.637	41,66
12	.688 .750	17,48 19,05									.912	23,16	1.696	43,08	.960	24,38	1.762	44,75
13	.751 .812	19,08 20,62													1.022	25,96	1.887	47,93
14	.813 .875	20,65 22,22													1.085	27,56	2.012	51,10

NOTES – *d) Code 4-01, 5-01 and 6-02 rivets are no longer manufactured.*

e) For code 4-02 rivets, the minimum grip length will be : .062 in, 1.58 mm.
For code 5-02 rivets, the minimum grip length will be : .080 in, 2.03 mm.

f) The rivets L and M references shown between thick lines are immediately available.

g) Longer rivets can be manufactured on request.

6 – PROVISIONING SPECIFICATION : *NAS 1900.*

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APPLICABLE INFORMATION

Company reference number (CMS)

The radix of CMS for these rivets is :

5	5	4	8	4	1	6			

Manufacturers (non exhaustive list)

NAME	REFERENCE N°
HUCK (AEROTECHNIC)	** See table paragraph 3*

** This reference N° is similar to that used by AEROSPATIALE except that :*
*— The basic reference N° 54216 is replaced by serial number MLS 100 B.**
Example : AEROSPATIALE *54216-6-08*
HUCK *MLS100-B6-08*

Applicable documents :
— These rivets are in compliance with Standard NAS 1919 for corresponding length and diameter codes.
— Precautions to be taken for correct installation and proper use of «HUCK» blind rivets : IFHI N° 291.
— «HUCK» blind rivets, general and installation : ASN-A0025.

Equivalent documents

Standard ASN –A0028 supersedes Standard ASN 542-16, issue D.
The rivets defined in these two documents as well as their coded references are identical.

CROSS REFERENCE CHART FOR OLD AND NEW REFERENCE N°S

(Values given in millimetres)

Old reference N°				New reference N°			
Aerospatiale (NSA) (issue : 8-69)	HUCK	Grip length min.	Grip length max.	Grip length min.	Grip length max.	Aerospatiale ASN–A0028	HUCK
-54216-040-010	X 100 V4A	1,59	1,98	1,58	3,17	54216-4-02	MLS100-B4-2
——— 020	——— V4B	2,00	2,62				
——— 030	——— V4C	2,64	3,25				
-54216-040-040	X 100 V4D	3,28	3,65	3,20	4,75	54216-4-03	MLS100-B4-3
——— 050	——— V4E	3,91	4,52				
-54216-040-060	X 100 V4F	4,54	5,16	4,78	6,35	54216-4-04	MLS100-B4-4
——— 070	——— V4G	5,18	5,79				
——— 080	V4H	5,82	6,43				
-54216-040-090	X 100 V4J	6,45	7,06	6,38	7,92	54216-4-05	MLS100-B4-5
-54216-050-010	X 100 V5A	2,03	2,54	2,03	3,17	54216-5-02	MLS100-B5-2
——— 020	——— V5B	2,56	3,33				
-54216-050-030	X 100 V5C	3,35	4,11	3,20	4,75	54216-5-03	MLS100-B5-3
——— 040	——— V5D	4,14	4,90				
-54216-050-050	X 100 V5E	4,93	5,69	4,78	6,35	54216-5-04	MLS100-B5-4
——— 060	——— V5F	5,71	6,48				
-54216-050-070	X 100 V5G	6,50	7,26	6,38	7,92	54216-5-05	MLS100-B5-5
——— 080	——— V5H	7,29	8,05				
-54216-050-090	X 100 V5J	8,08	8,84	7,95	9,52	54216-5-06	MLS100-B5-6
——— 100	——— V5K	8,86	9,63				
-54216-050-110	X 100 V5L	9,65	10,41	9,55	11,10	54216-5-07	MLS100-B5-7
——— 120	——— V5M	10,44	11,20				
-54216-050-130	X 100 V5N	11,23	11,99	11,12	12,70	54216-5-08	MLS100-B5-8
-54216-060-010	X 100 V6A	2,54	3,15	2,54	3,17	54216-6-02	MLS100-B6-2
-54216-060-020	X 100 V6B	3,17	4,09	3,20	4,75	54216-6-03	MLS100-B6-3
——— 030	——— V6C	4,11	5,03				
-54216-060-040	X 100 V6D	5,05	5,97	4,78	6,35	54216-6-04	MLS100-B6-4
——— 050	——— V6E	5,99	6,91				
-54216-060-060	X 100 V6F	6,93	7,85	6,38	7,92	54216-6-05	MLS100-B6-5
-54216-060-070	X 100 V6G	7,87	8,79	7,95	9,52	54216-6-06	MLS100-B6-6
——— 080	——— V6H	8,81	9,73				
-54216-060-090	X 100 V6J	9,75	10,67	9,55	11,10	54216-6-07	MLS100-B6-7
——— 100	——— V6K	10,69	11,61				
-54216-060-110	X 100 V6L	11,63	12,55	11,12	12,70	54216-6-08	MLS100-B6-8
-54216-060-120	X 100 V6M	12,57	13,49	12,72	14,27	54216-6-09	MLS100-B6-9
——— 130	——— V6N	13,51	14,43				
-54216-060-140	X 100 V6P	14,45	15,37	14,30	15,87	54216-6-10	MLS100-B6-10

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