



TECHNICAL BULLETIN

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NAS1919 AND NAS1921 ALTERNATE FASTENER WITH DRIVE ANVIL

1. PLANNING INFORMATION

A. Aircraft Affected:

All McDonnell Douglas Helicopter Systems (MDHS) MD900 helicopters, serial number MD900-000001 thru MD900-999999.

B. Assembly/Components Affected By This Notice:

NAS1919XXXS and NAS1921XXXS Blind Rivets installed throughout the MD900.

C. Reason:

Owner/Operators may desire to install NAS1919XXXSXXU fasteners as an alternate to NAS1919XXXSXX fasteners and NAS1921XXXSXXU fasteners as an alternate to NAS1921XXXSXX fasteners. Not installing fasteners with a U at the end of the part number may result in un-necessary tooling requirements.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to an alternate NAS1919XXXS and NAS1921XXXS Blind Rivet that does not require Huck tool to install. The alternate fastener may be installed at any location that a NAS1919XXXS or NAS1921XXXS fastener had been previously installed. The "S" following the fastener material and diameter information signifies the fastener is for use with single (non-shifting) hand held installation tools. The "U" following the length information signifies the fastener incorporates a drive anvil to seat the lock collar. Any installation tool with a flat nose may be used to install rivets with the "U" code.

E. Time of Compliance

Customer option, at the discretion of the owner/operator.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Dependant on rivet quantity and location.

H. Interchangeability:

None

I. Disposition of Parts Removed

N/A

J. Points of Contact

For further assistance, contact your local MDHI Field Service Representative (refer to the latest revision of the "At Your Service" handbook for address and telephone numbers) or contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 891-6342. DATAFAX: (480) 891-6782.

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K. Material/Part Availability:

Contact MDHS Commercial Part Sales Department.

Table 1. Replacement Parts/Supplies

Nomenclature	Part No.	Qty.	Source
Rivet, Blind, General Purpose, Mechanically Locked Spindle	NAS1919XXXSXXU (1)	AR	Commercial or MDHS
Rivet, Blind, General Purpose, 100° Flush, Mechanically Locked Spindle	NAS1921XXXSXXU (1)	AR	Commercial or MDHS

NOTES:

- (1) Refer to Table 2 for material information required to complete part number.
- (2) Refer to Table 3 for diameter and length information required to complete part number.

Table 2. NAS1919 Material Component of Part Number

Composition Code Letter	Sleeve Composition	Spindle Composition	Lock Ring Composition
B	5056 Aluminum (QQ-A-430)	2024 Aluminum (QQ-A-430)	5056 Aluminum (QQ-A-430)
C	A286 CRES (AMS5737)	A286 CRES (AMS5737)	A286 CRES (AMS5737) or 316 CRES (AMS5690)
M	Monel (QQ-N-281)	A286 CRES (AMS5737)	A286 CRES (AMS5737), Monel (QQ-N-281) or 316 CRES (AMS5690)



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Table 3. NAS1919 Grip Range (dimensions in inches (mm))

Grip Length Dash No.	NAS1919X04 0.125 in. (3.175 mm) Diameter			NAS1919X05 0.156 in. (3.962 mm) Diameter			NAS1919X06 0.190 in. (4.826 mm) Diameter			NAS1919X08 0.250 in. (6.350 mm) Diameter		
	Grip Range		Length	Grip Range		Length	Grip Range		Length	Grip Range		Length
	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX
00	0.020 0.508	0.035 0.889	0.171 4.343	0.025 0.635	0.045 1.143	0.193 4.902	N/A	N/A	N/A	N/A	N/A	N/A
01	0.025 0.635	0.062 1.575	0.198 5.029	0.031 0.787	0.062 1.575	0.227 5.766	0.037 0.940	0.062 1.575	0.251 6.375	N/A	N/A	N/A
02	0.063 1.600	0.125 3.175	0.260 6.604	0.063 1.600	0.125 3.175	0.273 6.994	0.063 1.600	0.125 3.175	0.287 7.290	0.063 1.600	0.125 3.175	0.335 8.509
03	0.126 3.200	0.187 4.750	0.323 8.204	0.126 3.200	0.187 4.750	0.338 8.585	0.126 3.200	0.187 4.750	0.350 8.890	0.126 3.200	0.187 4.750	0.397 10.084
04	0.188 4.775	0.250 6.350	0.385 9.779	0.188 4.775	0.250 6.350	0.398 10.109	0.188 4.775	0.250 6.350	0.412 10.465	0.188 4.775	0.250 6.350	0.460 11.684
05	0.2516 375	0.312 7.925	0.448 11.379	0.251 6.375	0.312 7.925	0.461 11.709	0.251 6.375	0.312 7.925	0.475 12.065	0.251 6.375	0.312 7.925	0.522 13.259
06	0.313 7.950	0.375 9.525	0.510 12.954	0.313 7.950	0.375 9.525	0.523 13.284	0.313 7.950	0.375 9.525	0.537 13.640	0.313 7.950	0.375 9.525	0.585 14.859
07	0.376 9.550	0.437 11.100	0.573 14.046	0.376 9.550	0.437 11.100	0.586 14.884	0.376 9.550	0.437 11.100	0.600 15.240	0.376 9.550	0.437 11.100	0.647 16.434
08	0.438 11.125	0.500 12.700	0.635 16.129	0.438 11.125	0.500 12.700	0.648 16.459	0.438 11.125	0.500 12.700	0.662 16.815	0.438 11.125	0.500 12.700	0.710 18.034
09	0.501 12.725	0.562 14.275	0.698 17.729	0.501 12.725	0.562 14.275	0.711 18.059	0.501 12.725	0.562 14.275	0.725 18.415	0.501 12.725	0.562 14.275	0.772 19.609
10	0.563 14.300	0.625 15.875	0.761 19.329	0.563 14.300	0.625 15.875	0.773 19.634	0.563 14.300	0.625 15.875	0.787 19.990	0.563 14.300	0.625 15.875	0.835 21.209
11				0.626 15.900	0.687 17.450	0.836 21.234	0.626 15.900	0.687 17.450	0.850 21.590	0.626 15.900	0.687 17.450	0.897 22.784
12							0.688 17.475	0.750 19.050	0.912 23.165	0.688 17.475	0.750 19.050	0.960 24.384
13										0.751 19.075	0.812 20.625	1.022 25.959
14										0.813 20.650	0.875 22.225	1.085 27.559

L. Warranty Policy:

N/A

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M. Tooling:

Table 4. Drill Bit and Drive Punch Size

Diameter	Spindle (Stem)		Sleeve (Body)	
	Code	Drill	Punch	Punch
04	# 40 0.098 in (2.489 mm)	0.094 inch (2.38mm)	#30 0.129 in (3.264 mm)	0.125 in (3.175 mm)
05	# 40 0.098 in (2.489 mm)	0.094 inch (2.38mm)	#20 0.161 in (4.089 mm)	0.156 in (3.970mm)
06	#30 0.129 in (3.264 mm)	0.125 in (3.175 mm)	#10 0.194 in (4.915 mm)	0.188 in (4.763 mm)
08	#30 0.129 in (3.264 mm)	0.125 in (3.175 mm)	"F" 0.257 in (6.528mm)	0.250 in (6.350mm)

NOTE: NAS1919XXXSXXU and NAS1921XXXSXXU rivets may be installed with any "Pop Rivet" hand rivet puller using the smallest nose piece that will accommodate the rivet stem.

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

N/A

2. ACCOMPLISHMENT INSTRUCTIONS

This repair procedure is typical and may be used for any installed NAS1919 or NAS 1921 rivet. (Ref. Table 1, Table 4, and Table 5)

Consumable Materials (Ref. CSP-SPM)

<u>Item</u>	<u>Nomenclature</u>
C310	Primer

Protective Equipment



- (1). If not already removed, remove rivet to be replaced.
 - (a). Using a stem drill bit (Ref. Table 4), drill through rivet center stem.
 - (b). With a stem punch (Ref. Table 4), remove rivet stem lock ring.
 - (c). Using a body drill bit (Ref. Table 4), drill through rivet body to a depth slightly greater than the thickness of the rivet head.
 - (d). If rivet head has not come off, remove by inserting a body punch (Ref. Table 4) into the previously drilled hole and levering the rivet head until it breaks off.

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Back up area adjacent to rivet with hard wood, or other suitable substance prior to driving out rivet body.

- (e). Using a body punch (Ref. Table 4), drive the remainder of the rivet body out of the rivet hole.
 - (f). Inspect hole diameter (Ref. Table 5). If hole is above maximum limit, install next size larger fastener.
- (2). Determine diameter and grip length of rivet to be installed.

Primer (C310)



- (3). Install new rivet wet with primer (C310)

Table 5. Fastener Hole Diameter Limits

Diameter Code	Hole Diameter Limits	
	Minimum	Maximum
04	0.128 in (3.251 mm)	0.132 in (3.353 mm)
05	0.160 in (4.064 mm)	0.164 in (4.166 mm)
06	0.192 in (4.877 mm)	0.196 in (4.978 mm)
08	0.256 in (6.502 mm)	0.261 in (6.629 mm)

- (4). Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.