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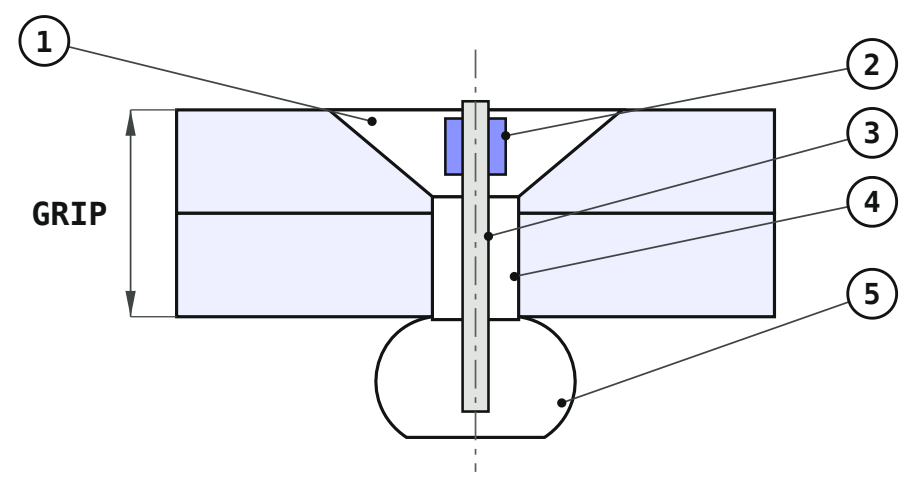
ASNA Fasteners: Reading the Number, the Units and the Tools

Unit traps · reading the number · Maxibolt steel and titanium · tools · inspection

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS

SECTION A–A

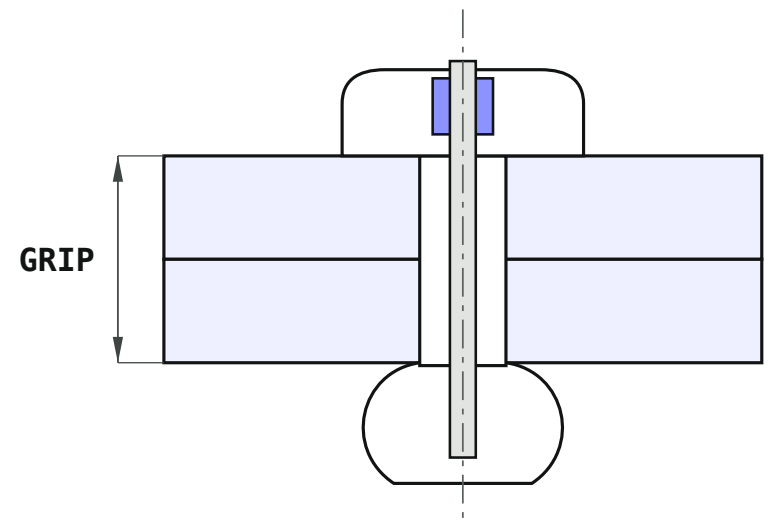
100° COUNTERSUNK HEAD · FLUSH



Countersink never through the sheet: a straight bore remains.

SECTION B–B

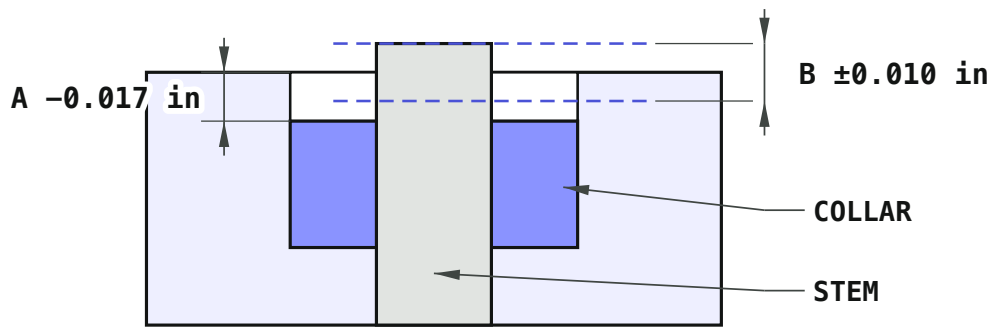
PROTRUDING HEAD



Gap under the head: 0.004 in (0.10 mm) at most.

DETAIL C

HEAD TOP, ENLARGED · CODE 05 SHOWN



Code 05 shown. Millimetres are printed and stated by the standard.
A: collar never proud of the head. B: stem within the band.

LIMITS BY CODE

INCH FIRST · MM PRINTED

CODE	STEM FLUSH B	COLLAR FLUSH A
04 Ti	±0.010 in (±0.25 mm)	0 / −0.015 in (−0.38 mm)
05	±0.010 in (±0.25 mm)	0 / −0.017 in (−0.43 mm)
06	±0.010 in (±0.25 mm)	0 / −0.022 in (−0.56 mm)
08	±0.015 in (±0.38 mm)	0 / −0.029 in (−0.74 mm)

PARTS LIST

#	ITEM	NOTE
1	Head	100° countersunk or protruding
2	Collar	Locks the stem
3	Stem	Breaks at the groove
4	Body	Fills the hole
5	Blind bulb	Formed by the pull

NOTES

1. Dimensions in inches. Do not scale: the SRM sets the values.
2. For reference. The applicable manual always governs.
3. Based on ASNA0026 inspection limits.

REVISIONS

REV	DESCRIPTION	YEAR
B	Revised	2026

The Aviation Point. Structural repair reference

TITLE			
ASNA fasteners			
DRAWING NO. TAP-DWG-126	REV B · 2026	SCALE NTS	SHEET 1 OF 1
APPLIES TO Maxibolt type, steel and titanium			
DO NOT SCALE DRAWING			

Installed sections with the stem flush B and collar flush A checked after the pull.

Unit traps: read these first

Trap	What the standard prints	What it means
Inch codes	Inch codes, millimetre tables: diameter and grip codes sit beside rounded mm values, and the unit of the code is rarely named.	On the blind fasteners of US origin (CherryMAX, Maxibolt, Jo-Bolt and Composi-Lok types) the diameter code counts 1/32 in and the grip code 1/16 in. Treat the mm as a printed conversion, not as the size.
Maxibolt code 05	One code, four diameters: it appears as 3.97, 4, 4,0 and 4,14.	3.97 mm is the nominal 5/32 in (0.156 in) and is printed with no unit. 4,14 mm is the real body, 0.163 in, printed in mm. 4 and 4,0 are rounded names. The hole comes from the hole table, 0.164–0.167 in. Never drill 5/32 in.
Grip codes	Grip codes do not travel: code 04 means something different in three families.	CherryMAX type: 0.188–0.250 in (4.78–6.35 mm). Maxibolt type: 0.219–0.282 in (5.56–7.16 mm), shifted 1/32 in. Jo-Bolt type: 0.220–0.281 in (5.59–7.14 mm). Composi-Lok: the code is the maximum grip in thousandths of an inch (150 = 0.150 in, our reading). Radial-Lok follows another rule.
Metric solid rivets	ASNA2049, 2050 and 2051 list 4 and 4,8 only. The drill and shop-head table they share with other standards also runs through 2,4 and 3,2.	These are millimetres. 4 means 4 mm (0.157 in), close to 5/32 in; it is never dash -4, which is 1/8 in (0.125 in).
Jo-Bolt marks	Diameter marks 2 to 6 are size indices.	Not mm and not 1/32 in. Mark 2 = 4.15 mm (0.163 in, #8 class), 3 = 4.8 mm (0.189 in, #10 class), 4 = 6.3 mm (1/4 in), 5 = 7.89 mm (5/16 in), 6 = 9.49 mm (3/8 in). The diameter header prints no unit: the inch sizes are our reading.
Tenths of a mm	European partners count tenths of a millimetre: PAN3614-40-06, MBBN3012L3202, ABS0112-24.	40 = 4.0 mm, 32 = 3.2 mm, 24 = 2.4 mm. Never read those digits as 1/32-in dashes. The oversize MBBN 36 = 3.6 mm is 1/8 in + 1/64 in.
No unit printed	Figures with no unit: edge distance, pitch, distance to a bend, gauge steps (+,000 / +,058), Jo-Bolt stem position B.	Published as «unit not stated». This guide shows them as printed and, where it converts, says so. A figure with no unit is never converted in silence.
Cross-only numbers	Washers and the cross-only numbers: ASNA2397; ASNA0061 to 0064; ASNA0079 and 0080.	ASNA2397 follows the AN960 dash logic (inch, by equivalence). ASNA0061–0064 pair digit for digit with NAS1398, NAS1399, NAS1738 and NAS1739 (inch), but no source states their unit. ASNA0079 and 0080 do not decode: only the cross is shown.

Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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Tools by family and diameter

Family	Standards · code	Tool	Straight head	90° head	Offset head
`CherryMAX type`	ASNA0077, 0078 · 4, 5, 6	G747 pneumatic (stroke 0.437 in = 11.1 mm printed); hand tool G27 for code 4 only	H701B-456, or H747-456 with insert 782-456	H753A-456	H782 + insert 782-456; H781-456 only where access forces it (nose setback L = rivet diameter, mandatory for code 4)
`Maxibolt S`	04 (titanium only)	G704B or G747	H701B-456 or H747-456	H753A-456	H782 + insert 782-456
`Maxibolt S`	05	G83 (or G704B / G747 with the -456 heads above)	H83B-5MB	H828-5MB + adapter 744-300	H782 + insert 782-456 + adapter 744-300
`Maxibolt S`	06	G83	H83B-6MB	H828-6MB + adapter 744-300	H856-6MB + adapter 744-300
`Maxibolt S`	08	G84	H84A-8MB	none on the standard's sheet; **titanium S only**: H828-8MB on G84 + adapter 744-200 (manufacturer), never for the steel -8	none
`Maxibolt U`	no washer · 05, 06, 08	Same tool bodies as S, -MBU heads (manufacturer catalogue)	H83B-5MBU · H83B-6MBU · H84A-8MBU, H84C-8MBU, H84D-8MBU	H828-5MBU; H828-6MB with U nosepiece 828-036	none
`CherryLOCK A`	ASNA0061, 0062 · 3, 4	G747 or 746A; hand tool G30	H747-3A + insert 782-3E	H753A-456 + insert 782-3E (grip code 4 maximum)	H782 + insert 782-3E
`Composi-Lok, Radial-Lok`	ASNA0012, 0013, 302, 303 · 5, 6, 8	MP550RL pneumatic pistol-grip	MP550RL	MRT300 (restricted access)	none
`Jo-Bolt type`	ASNA0081, 0082 · 2 to 6	The tool is not given in our data: use the maker's installation tool; the threaded stem is pulled until it breaks off	—	—	—
`Solid rivets`	ASNA2049, 2050, 2051 · all	Squeezing: pneumatic or manual squeezer. Percussion: rivet gun with rivet set and bucking bar	—	—	—

Key points

- **Inch fasteners, mm tables.** Diameter code in 1/32 in, grip code in 1/16 in; the mm printed are conversions.
- **Drill from the hole table, never the nominal.** Maxibolt code 05 is 5/32 in nominal but 0.163 in at the body; hole 0.164–0.167 in.
- **Grip codes do not travel:** code 04 differs between CherryMAX, Maxibolt and Jo-Bolt types.
- **Titanium Maxibolt** (ASNA0341, 0342, 0363): letter T, codes 05, 06, 08 (04 on 0341), grips 01 to 16.
- **Metric solid rivets** (ASNA2049 to 2051): 4 means 4 mm, K = 1.3, never cut to length.
- **Countersink 100° only,** never through the sheet.
- **No unit printed means no unit assumed.** Conversions are marked.

Step by step

1. Read the segments of the number.
2. Take the hole from the hole table and the drill from the drill chart.
3. Pick the tool by family and diameter.
4. Measure the stack and choose the grip from the family's own table.
5. Inspect: gap under the head, stem and collar flush.

SOURCES · ASNA standards: ASNA0012, 0013, 0026, 0027, 0077, 0078, 0081, 0082, 0341, 0342, 0363, 302, 303, 2049, 2050, 2051 · Cherry Aerospace pulling-head sheets · US federal item records and distributor listings · FAA-H-8083-31B, Aviation Maintenance Technician Handbook: Airframe, Chapter 4

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