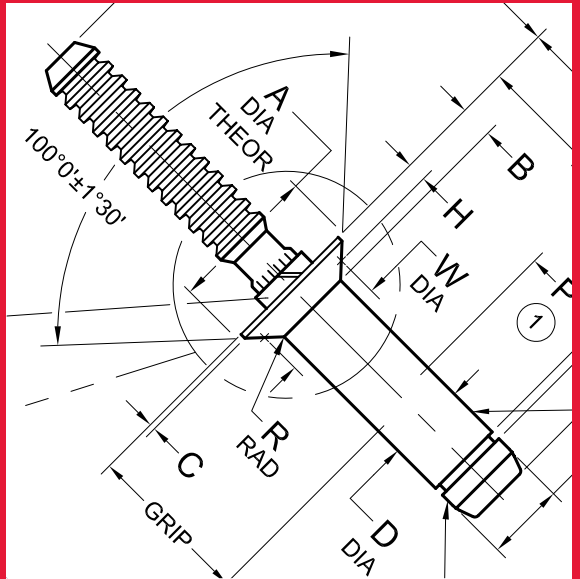


CHERRY MAXIBOLT® PROCESS MANUAL



CHERRY®
AEROSPACE

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LIMITED WARRANTY

Seller warrants the goods conform to applicable specifications and drawings and will be manufactured and inspected according to generally accepted practices of companies manufacturing industrial or aerospace fasteners. In the event of any breach of the foregoing warranty, Buyer's sole remedy shall be to return defective goods (after receiving authorization from Seller) for replacement or refund of the purchase price, at the Seller's option. Seller agrees to any freight costs in connection with the return of any defective goods, but any costs relating to removal of the defective or nonconforming goods or installation of replacement goods shall be Buyer's responsibility. SELLER'S WARRANTY DOES NOT APPLY WHEN ANY PHYSICAL OR CHEMICAL CHANGE IN THE FORM OF THE PRODUCT IS MADE BY BUYER. THE FOREGOING EXPRESS WARRANTY AND REMEDY ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES; ANY IMPLIED WARRANTY AS TO QUALITY, FITNESS FOR PURPOSE, OR MERCHANTABILITY IS HEREBY SPECIFICALLY DISCLAIMED AND EXCLUDED BY SELLER. This warranty is void if seller is not notified in writing of any rejection of the goods within one (1) Year after initial use by buyer of any power Riveter or ninety (90) days after initial use of any other product. Seller shall not be liable under any circumstances for incidental, special or consequential damages arising in whole or in part from any breach by Seller, AND SUCH INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES ARE HEREBY EXPRESSLY EXCLUDED.

Our policy is one of continuous development. Specifications shown in this document may be subject to changes introduced after publication.

CHERRY® and MAXIBOLT™ are trademarks of Cherry Aerospace.

ATTENTION: Blind fasteners are not always interchangeable with non-blind fasteners. Consult with the aircraft Original Equipment Manufacturer for proper application of this product.

CHERRY MAXIBOLT® INSTALLATION SEQUENCE

This process manual is for reference on how to identify and work with Cherry MAXIBOLT blind bolt fasteners. The manual includes information on:

- Fastener selection and part identification
- Hole preparation
- Inspection procedures
- Troubleshooting
- Installation tooling

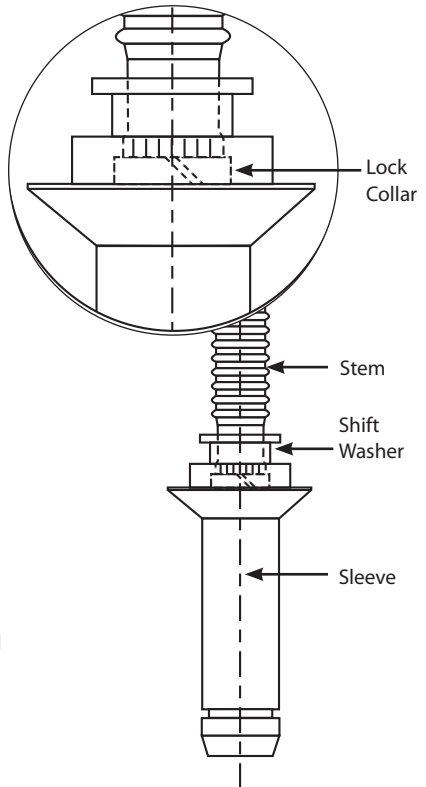
CHERRY MAXIBOLT FEATURES

Cherry MAXIBOLT Blind bolts offer fast and consistent installation in metallic and composite structures. The Cherry MAXIBOLT consists of four components assembled as a single unit:

- A. Fully serrated stem with break notch
- B. A shift washer to insure a viable mechanical lock with each fastener installation*
- C. A separate locking collar that mechanically locks the stem to the sleeve
- D. A blind bolt sleeve with a recess in the head to receive the locking collar.

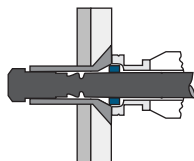
Information contained in this manual applies to Cherry MAXIBOLT, Cherry Titanium MAXIBOLT and Cherry MAXIBOLT PLUS unless otherwise noted.

**S-Type MAXIBOLT and MAXIBOLT PLUS bolts only.

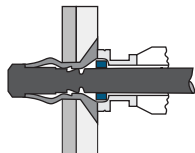


CHERRY MAXIBOLT® INSTALLATION SEQUENCE

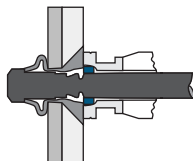
1. The Cherry MAXIBOLT is inserted into the prepared hole. The pulling head is slipped over the stem. With a firm pressure added to seat the head, the installation tool is actuated.



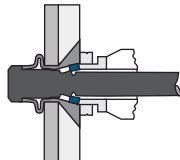
2. The pulling action on the stem causes the sleeve to form away from the backside of the structure, thereby eliminating exit hole delamination in composite structures.



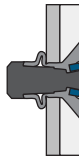
3. The continued pulling action compresses the large bearing area against the backside of the structure.



4. The Cherry patented shift washer collapses into itself, driving the locking collar into the head recess and then into the stem locking groove to form an integral lock.



5. The stem fractures at the break notch providing a flush, burr-free, installation.



Note: Installation sequence shown for “S” type MAXIBOLTS with shifting washer. Sequence is similar for “-” and “U” types without shift washer.

INSTALLATION

NOTES

"-"TYPE

"-" Signifies that the 5/32" and 3/16" diameter sizes are installed with a double action (shifting type) tool.

"S"TYPE*

The "S" type fastener has a shift washer and lock collar. "S" Signifies that the fastener is installed with a single action (non-shifting) tool for 5/32" and 3/16" diameters. "-" signifies that the fastener is installed with a single action (non-shifting) tool for 1/4" and 5/16" diameters.

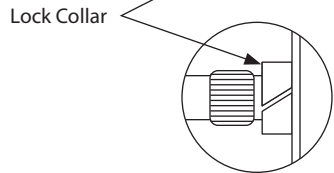
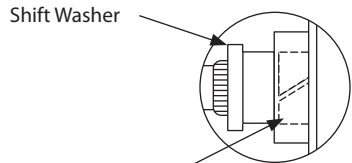
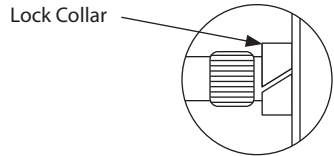
"U"TYPE*

"U" Signifies that the fastener is installed by a single action (non-shifting) tool for all diameters.

- NOTES
1. -05 and -06 dia. fasteners are installed with a double action (shifting) tool; S05 dia., S06 dia., -08 dia., and -10 dia. fasteners are installed with a single action (non-shifting) tool and are supplied with shift washer. The lock collar is solid or split, manufacturer's option.
 2. Minimum grip for -05 dia. is .094 and -06 dia. is .120.
 3. A special tool nosepiece is required for all "U" type fasteners.

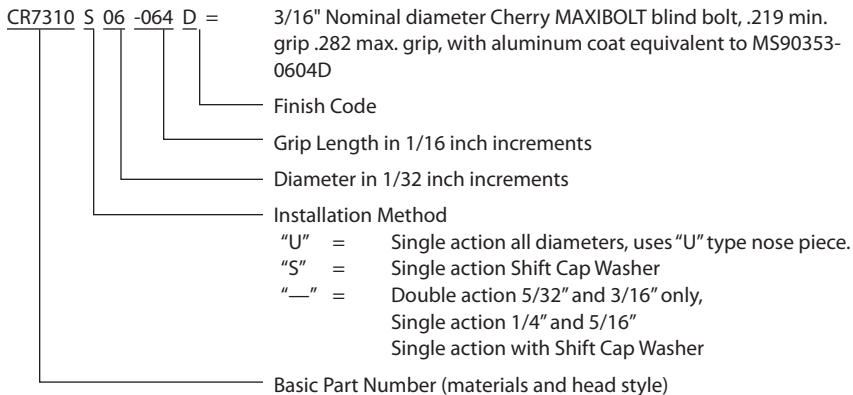
* Green paint or dye on stem and/or shift washer indicates a single action installation tool requirement.

Lack of green paint or dye on -05 and -06 products indicate that a double action installation tool system must be used.



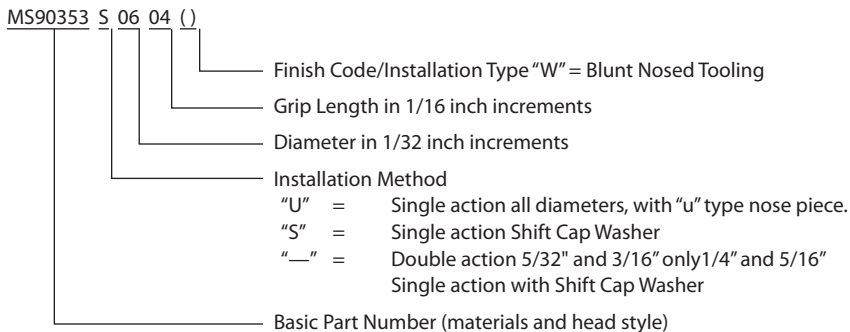
FASTENER IDENTIFICATION

CHERRY PART NUMBER IDENTIFICATION



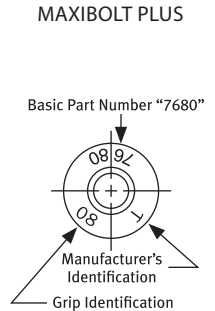
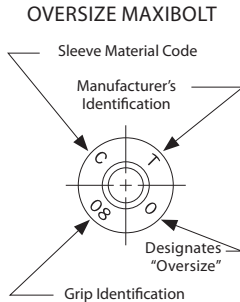
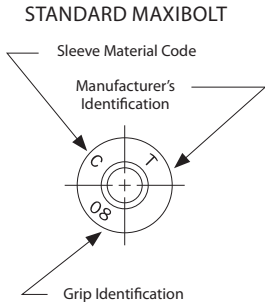
Note: Refer to Cherry MAXIBOLT catalogue for complete list of finish alternates and codes.
See page 6 for cross reference of Cherry MAXIBOLT and MS part numbers.

MILITARY PART NUMBER IDENTIFICATION



FASTENER IDENTIFICATION

HEAD MARKINGS



1. Single digit marking is permissible for grip dash numbers less than 10
2. Sleeve Material

MAXIBOLT — STANDARD AND OVERSIZE

Material Code	Sleeve Material
C	Stainless Steel A-286 CRES, AMS 5737
MV or 7774	CP Titanium per ASTM - B348, Gr. 1
none	4037 Alloy Steel ASTM-A-331

MAXIBOLT PLUS

Product Number	Material	Head Style
CR7680S	Stainless Steel	100° Flush Head (AN509)
CR7683S	Stainless Steel	Protruding Head
CR7684S	Stainless Steel	130° Flush Head
CR7686S	Stainless Steel	100° Flush Head (MS20426)
CR7784S	Titanium	130° Flush Head

FASTENER IDENTIFICATION

MILITARY PART NUMBER CROSS REFERENCE

Fastener Diameter	A286 CRES Per NASM8975 95 KSI Shear		Alloy Steel Per NASM81177 112 KSI Shear		Installation Criteria	
	MS Part No.	Cherry Part No.	MS Part No.	Cherry Part No.	Riveter**	Nose Piece Type***
05 5/32" (0.164)	MS21140-05*	CR7620-05-*	MS90353-05*	CR7310-05-*	DA	N/A
	MS21140S05*	CR7620S-05-*	MS90353S05*	CR7310S-05-*	S	B or U
	MS21140U05*	CR7620U-05-*	MS90353U05*	CR7310U-05-*	S	U
	MS21141-05*	CR7621-05-*	MS90354-05*	CR7311-05-*	DA	N/A
	MS21141S05*	CR7621S-05-*	MS90354S05*	CR7311S-05-*	S	B or U
	MS21141U05*	CR7621U-05-*	MS90354U05*	CR7311U-05-*	S	U
Oversize 05 5/32" (0.179)	None	CR7650S-05-*	None	CR7340S-05-*	S	B or U
	None	CR7651S-05-*	None	CR7341S-05-*	S	B or U
06 3/16" (0.199)	MS21140-06*	CR7620-06-*	MS90353-06*	CR7310-06-*	DA	N/A
	MS21140S06*	CR7620S-06-*	MS90353S06*	CR7310S-06-*	S	B or U
	MS21140U06*	CR7620U-06-*	MS90353U06*	CR7310U-06-*	S	U
	MS21141-06*	CR7621-06-*	MS90354-06*	CR7311-06-*	DA	N/A
	MS21141S06*	CR7621S-06-*	MS90354S06*	CR7311S-06-*	S	B or U
	MS21141U06*	CR7621U-06-*	MS90354U06*	CR7311U-06-*	S	U
Oversize 06 3/16" (.215)	None	CR7650S-06-*	None	CR7340S-06-*	S	B or U
	None	CR7651S-06-*	None	CR7341S-06-*	S	B or U
08 1/4" (0.260)	MS21140-08*	CR7620-08-*	MS90353-08*	CR7310-08-*	S	B or U
	MS21140U08*	CR7620U-08-*	MS90353U08*	CR7310U-08-*	S	U
	MS21141-08*	CR7621-08-*	MS90354-08*	CR7311-08-*	S	B or U
	MS21141U08*	CR7621U-08-*	MS90354U08*	CR7311U-08-*	S	U
Oversize 08 1/4" (0.260)	None	CR7650S-08-*	None	CR7340S-08-*	S	B or U
	None	CR7651S-08-*	None	CR7341S-08-*	S	B or U
10 5/16" (0.312)	MS21140-10*	CR7620-10-*	MS90353-10*	CR7620-10-*	S	B or U
	MS21140U10*	CR7620U-10-*	MS90353U-10*	CR7620U-10-*	S	U
	MS21141-10*	CR7621-10-*	MS90354-10*	CR7621-10-*	S	B or U
	MS21141U10*	CR7621U-10-*	MS90354U10*	CR7621U-10-*	S	U
Oversize 10 5/16" (0.328)	None	CR7650S-10-*	None	CR7340S-10-*	S	B or U
	None	CR7651S-10-*	None	CR7341S-10-*	S	B or U

* Grip Length dash number — see page XXXX

** Installation Riveter Codes: DA=Double Action, S=Single Action,

***B - Blunt type; U - Special Nose

P- Suffix to MS21140 and MS21141 indicates cadmium plate

D- Suffix to MS90353 and MS90354 indicates aluminum IVD coating

P- Suffix to Cherry Part No.for A286 CRES parts indicate cadmium plate

D- Suffix to Cherry indicates aluminum IVD coating;

Note: There is no cross-reference between the Cherry Titanium MAXIBOLT and any MS no.

Refer to Page 22 for Installation Tool Selection Chart

FASTENER IDENTIFICATION

HOLE PREPARATION

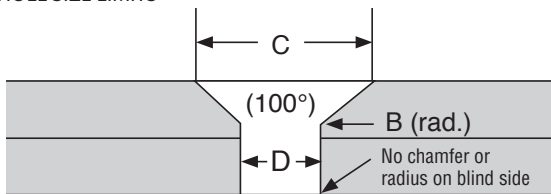
BLIND BOLT HOLE DIAMETER LIMITS

Nominal Fastener Diameter		Standard Diameter Hole Limits		Recommended Drill Size	1/64 Oversize Diameter Hole Limits		Recommended Drill Size
		D Min	D Max		D Min	D Max	
1/8	(-04)	.129	.132	#30	—	—	—
5/32	(-05)	.164	.167	#19	.180	.183	#14
3/16	(-06)	.199	.202	#7	.215	.218	5.5mm
1/4	(-08)	.260	.263	G	.276	.279	J
5/16	(-10)	.312	.315	5/16	.328	.331	21/64

100° COUNTERSINK DIMENSIONS

Fastener Diameter		Nominal and Oversize		Maximum Radius or Chamfer
		C Min	C Max	B Max
1/8	(-04)	.222	.228	.015
5/32	(-05)	.327	.335	.020
3/16	(-06)	.380	.388	.025
1/4	(-08)	.500	.509	.030
5/16	(-10)	.627	.637	.035

HOLE SIZE LIMITS

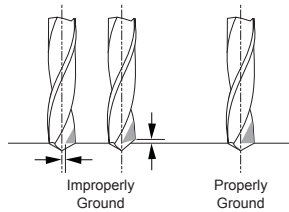


INSTALLATION AND INSPECTION

HOLE PREPARATION

DRILLING PROCEDURE

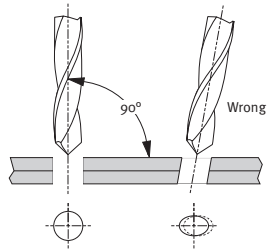
Use a clean, sharp properly ground drill. Improperly ground drills will create oval or oversized holes.



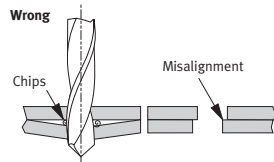
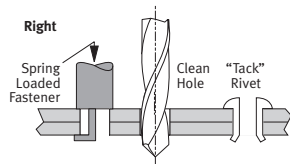
Center the drill in the chuck so that the drill will run true. A "wobble" in the drill will create an oversize hole.



Hold the drill perpendicular to the surface being drilled. Do not force the drill through the material.



To ensure proper hole alignment and to prevent burrs and chips from lodging between the sheets, the materials to be fastened should be clamped tightly together. Hole filling hollow "tack" rivets should be used in conjunction with spring-loaded fasteners to prevent material "creep" and hole misalignment during the drilling operation.



INSTALLATION AND INSPECTION

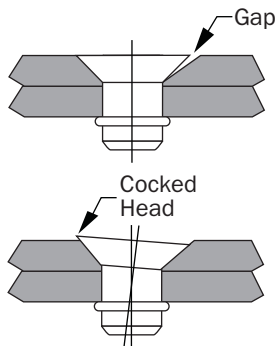
HOLE PREPARATION

COUNTERSINKING

Accurate countersinking is of primary importance to the structural integrity of a flush riveted joint. Standard countersinking procedures as used with solid rivets are also applicable to MAXIBOLT Rivets. The following points, however, should be carefully noted.

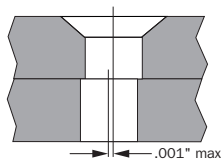
The countersink pilot should be no more than .001" smaller than the hole diameter. A greatly undersize pilot will produce a countersink which is not concentric with the hole, creating head gap problems.

A countersink pilot which is too small may also create a countersink whose axis is not in line with the axis of the drilled hole. This will create a "cocked" rivet head condition.

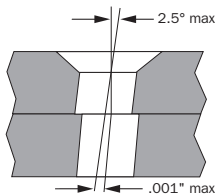


HOLE MISALIGNMENT

When drilling contoured surfaces, hole misalignment often becomes evident during fastener insertion. Avoid reinserting a drill into the hole to straighten it out. This may result in varying degrees of hole elongation on the blind side of the structure, which can lead to fastener malfunction. Drill the components together to avoid this condition.



Hole eccentricity tolerance



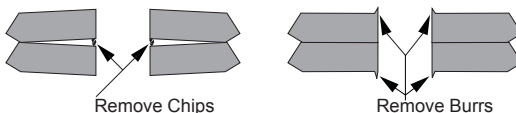
Hole/Countersink angularity tolerance

INSTALLATION AND INSPECTION

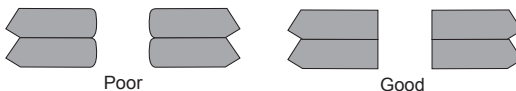
SOLE PREPARATION

DE-BURRING

All drilling operations cause burrs to form on each end of the hole being drilled, as well as between the sheets. Whenever possible, all burrs should be removed. Do not chamfer on blind side of sheet as this will affect clamp-up during the installation of the fastener.



When removing burrs, care must be taken to remove **ONLY** the burr. Do not countersink the sheets, as this may materially affect the strength of the riveted joint, particularly with respect to the blind sheet.



INSTALLATION AND INSPECTION

CHERRY MAXIBOLT GRIP GAGE

269B12 GAGE

FASTENER SELECTION

MEASURING THE PROPER GRIP LENGTH

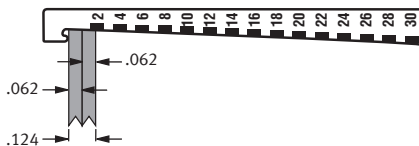
To determine proper grip, measure material thickness with a 269B12 Grip Gage as shown below. Insert the grip gage into the prepared hole, draw gage back until lip contacts backside of structure and read where front side of structure coincides with numbers and lines on gage.

Note: Gage does not include grip overlap.

Grip Dash No.	Grip Range	
	Min	Max
01	.031	.095
02	.094	.157
03	.156	.220
04	.219	.282
05	.281	.345
06	.344	.407
07	.406	.470
08	.469	.532
09	.531	.595
10	.594	.657
11	.656	.720
12	.719	.782
13	.781	.845
14	.844	.907
15	.906	.970
16	.969	1.032

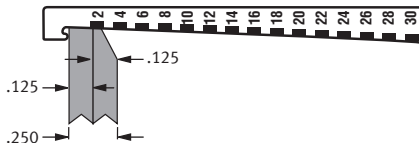
PROTRUDING HEAD

Correct blind bolt grip is a -02, since grip range of -02 MAXIBOLT is .094 to .154.



MACHINE COUNTERSUNK

Read correct blind bolt grip to the top of the sheet. Grip is sheet thickness plus blind bolt head height. In this example, grip is -04 since range of -04 MAXIBOLT is .219 to .282.



Note: Grip gage and grip ranges shown do not apply to Titanium MAXIBOLT or MAXIBOLT Plus fasteners. For grip ranges of these fasteners, see applicable part number Standard Page or contact Cherry Aerospace.

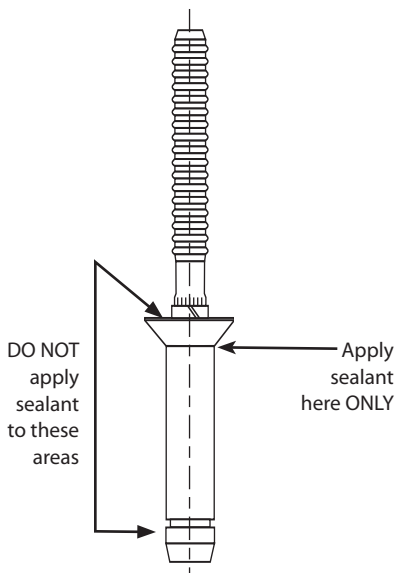
INSTALLATION AND INSPECTION

PROPER SEALANT APPLICATION

Blind bolts depend on a balance of lubricity to friction, compression and radial expansion during installation. In the manufacturing process, lubricants are typically used to ensure the blind bolt installs correctly.

Sealant should be applied **ONLY** around the bolt sleeve (see illustration). It is critical that the sealant does not touch the exposed areas of the stem.

When sealant is applied to the fastener incorrectly, two conditions may occur. Either the stem of the fastener will pull high or all the way through the bolt sleeve, or the stem will break prematurely and will be too deep in the bolt sleeve to be properly locked by the lock collar. In either case, the bolt must be removed and replaced. Initial care in the application of sealant will eliminate this replacement process.

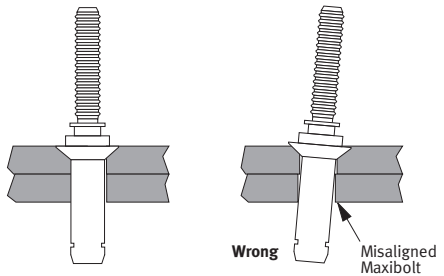


INSTALLATION AND INSPECTION

MAXIBOLT INSTALLATION

PLACING THE MAXIBOLT IN THE HOLE

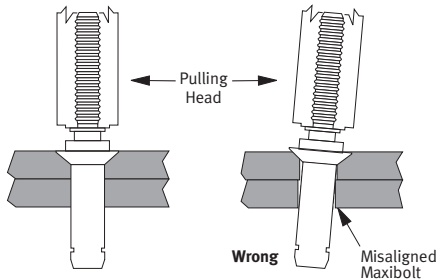
The holes in the sheets to be fastened must be of correct size and aligned properly. Do not force the bolt into the hole! "Tack Rivets" and/or spring loaded fasteners are recommended to minimize material creep and sheet gap.



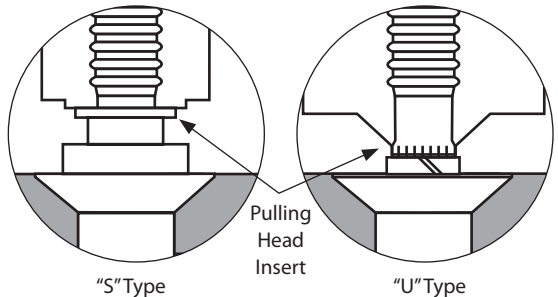
Installation Alignment

PLACING THE PULLING HEAD ON THE MAXIBOLT STEM

Hold the installation tool and pulling head in line with the axis of the bolt. Press firmly against head of bolt to minimize head gapping and sheet gap.



Position of Pulling Head on MAXIBOLT



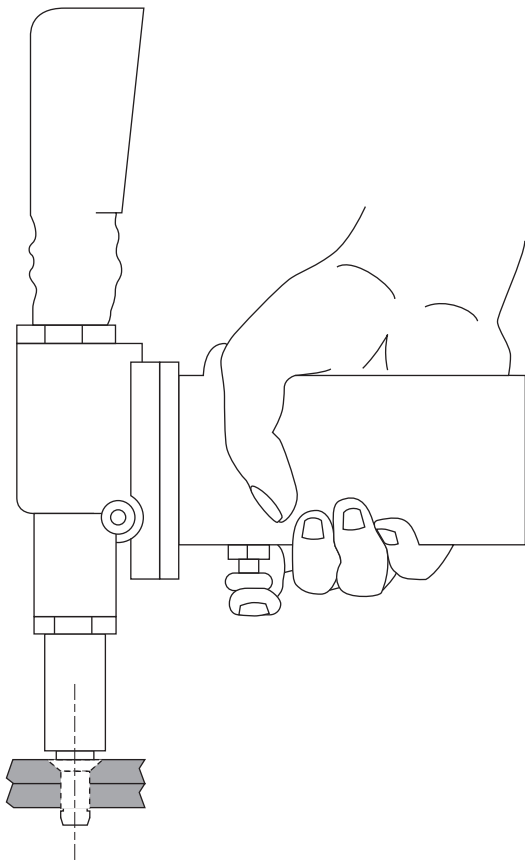
INSTALLATION AND INSPECTION

MAXIBOLT INSTALLATION (CONTINUED)

Hold the riveter perpendicular to the work piece as accurately as possible. Apply a steady, firm pressure and pull the trigger.

The MAXIBOLT clamping action will hold the sheets together, seat the head and break the stem flush with the head of the MAXIBOLT.

When the MAXIBOLT is completely installed, release the trigger and the stem will be passed through the riveter head. A stem catcher bag may be obtained to collect the spent stems.



MAXIBOLT INSPECTION & TROUBLE SHOOTING

Inspection for proper installation of the Cherry MAXIBOLT can be made from the visible side of the work. The installation condition outlined below can be used to determine whether a malfunction has been caused by:

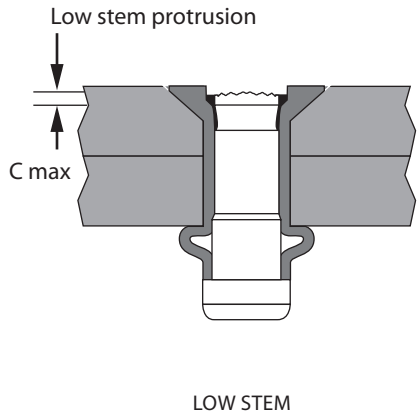
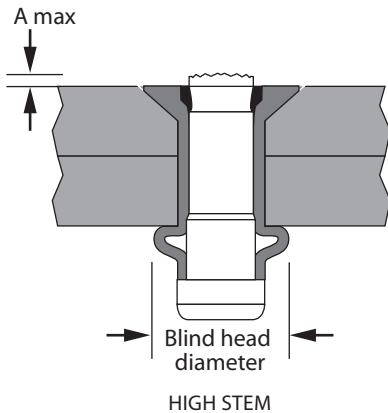
- Worker error
- Incorrect hole preparation
- Incorrect fastener selection
- Improper tool function

MALFUNCTION CHARACTERISTICS

Malfunction of the Blind Bolt may be recognized by and identified as:

1. High Stem
2. Low Stem
3. Low Collar
4. High Collar
5. Head not seated

STEM POSITION



MAXIBOLT INSPECTION & TROUBLESHOOTING

STEM POSITIONS

ALLOY STEEL POSITIONS

Fastener Diameter	A Max. Acceptable Stem Protrusion Limits	C Max Acceptable Stem Recession Limits ⁽²⁾	Blind Head Minimum Diameter
5/32 (05)	0.020	.000	0.195
3/16 (06)	0.024		0.238
1/4 (08)	0.030		0.315
5/16 (10)	0.038		.0373

(1) Per NASM 81177.

(2) Stem nominal fracture surface may not recede below top of fastener head.

STAINLESS STEEL STEM POSITIONS⁽³⁾

Fastener Diameter	A Max Acceptable Stem Protrusion Limits	C Max Acceptable Stem Recession Limits	Blind Head Minimum Diameter
1/8 (04)	0.010	0.010	0.154
5/32 (05)	0.010	0.010	0.195
3/16 (06)	0.010	0.010	0.238
1/4 (08)	0.015	0.015	0.315
5/16 (10)	0.020	0.020	0.373

(3) Per NASM 8975

TITANIUM STEM POSITIONS⁽⁴⁾

Fastener Diameter	A Max Acceptable Stem Protrusion Limits	C Max Acceptable Stem Recession Limits	Blind Head Minimum Diameter
1/8 (04)	0.010	0.010	0.185
5/32 (05)	0.010	0.010	0.235
3/16 (06)	0.010	0.010	0.275
1/4 (08)	0.015	0.015	0.350

(4) Per Cherry Aerospace specification P5-CMB-7000

MAXIBOLT INSPECTION STEM POSITIONS

HIGH STEM

Probable causes for high stem break are:

- Oversize hole
- Overgrip fastener
- Broken or worn down driving inner anvil

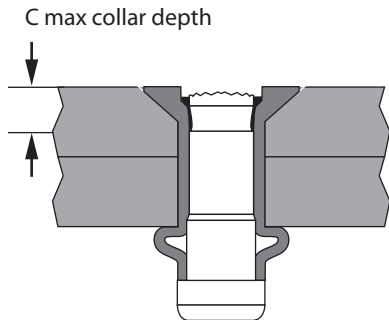
LOW STEM

Probable causes for low stem break are:

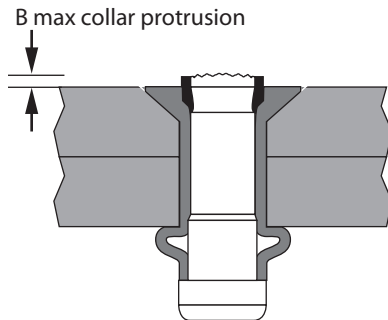
- Undergrip fastener
- Misaligned holes
- Shallow, countersink for flush head
- Blind side sheet angle over 5°.

MAXIBOLT INSPECTION

COLLAR POSITION



LOW COLLAR



HIGH COLLAR

ALLOY STEEL ⁽¹⁾

Fastener Diameter	B Max	C Max
5/32 (05)	0.017	0.017
3/16 (06)	0.022	0.022
1/4 (08)	0.029	0.029
5/16 (10)	0.037	0.037

(1) Per NASM81177

STAINLESS STEEL AND TITANIUM ⁽²⁾

The collar must be flush or below top of sleeve head.

Fastener Diameter	C Max
1/8 (04)	0.015
5/32 (05)	0.017
3/32 (06)	0.022
1/4 (08)	0.029
5/16 (10)	0.037

(2) Per NASM8975 and Cherry Aerospace PS-CMB-7000

MAXIBOLT INSPECTION

COLLAR POSITION

Low collar position in excess of the maximum limit are probably caused by:

- Excessive sheet gap
- Over maximum grip
- Incorrect shift pressure on double action tool

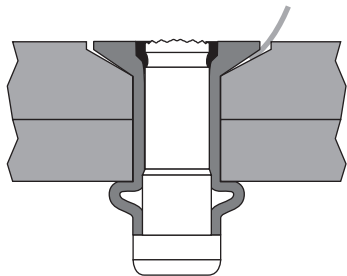
High collar position in excess of maximum limit are probably caused by

- Installation tool being tipped during driving cycle
- Interference between installation tool and some adjoining member, forcing tool out-of-sequence
- Inner anvil missing on double action tool
- Broken or worn anvil
- Shift pressure too high on double action tool
- Blind side angle over 5°.

MAXIBOLT INSPECTION

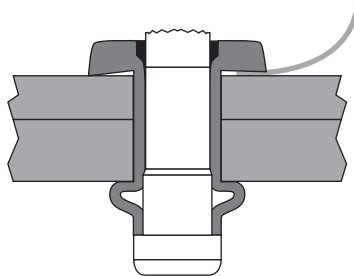
Flush Head

.002" feeler gage



Protruding head

.002" feeler gage



HEAD NOT SEATED

Improperly seated heads are probably caused by:

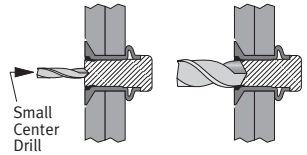
- Misaligned or slanted hole
- Installation tool tipped during driving cycle
- Blind side angle over 5°
- Hole too small for extruding sleeve
- Bad countersink

.002" gap permissible for 40% of fastener head diameter and must not penetrate to fastener shank.

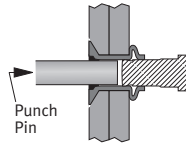
MAXIBOLT REMOVAL

Should it be necessary to remove an installed MAXIBOLT, the following procedures are recommended:

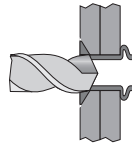
1. Center punch, center drill.
2. It is recommended that a small center drill be used to provide a guide for a larger drill on top of the blind bolt stem, and the upper portion of the stem be drilled away to destroy the lock.



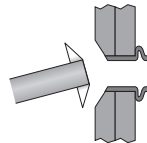
3. Drive out the stem using a punch pin.



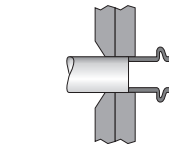
4. Drill into blind bolt head avoiding contact with the top sheet material.



5. Break off the blind bolt head using a punch pin as a pry.



6. Drive out the remaining blind bolt shank with a punch pin having a diameter equal to the bolt shank.



CAUTION — DO NOT drill completely through the head or the sleeve to remove a blind bolt as this will enlarge the hole.

INSTALLATION TOOL SELECTION CHART

CHERRY MAXIBOLT® INTERCHANGEABILITY

Head Style	Material	Part Number	
		Cherry	MS
Flush Head	Alloy Steel	CR7310S	MS90353S
		CR7310U	MS90353U
		CR7310	MS90353
Protruding Head	Alloy Steel	CR7311S	MS90354S
		CR7311U	MS90354U
		CR7311	MS90354
Flush Head	A-286 CRES	CR7620S	MS21140S
		CR7620U	MS21140U
		CR7620	MS21140
Protruding Head	A-286 CRES	CR7621S	MS21141S
		CR7621U	MS21141U
		CR7621	MS21141

CHERRY MAXIBOLT® PLUS HEAD STYLE / MATERIAL

Head Style	Material	Part Number Cherry
100° Flush Head (AN509)	Stainless Steel	CR7680S
Protruding Head	Stainless Steel	CR7683S
130° Flush Head	Stainless Steel	CR7684S
100° Flush Head (MS20426)	Stainless Steel	CR7686S
130° Flush Head	Titanium	CR7784S

CHERRY OVERSIZE MAXIBOLT® HEAD STYLE / MATERIAL

Head Style	Material	Part Number Cherry
Flush Head	Alloy Steel	CR7340S
		CR7340
Protruding Head	Alloy Steel	CR7341S
		CR7341
Flush Head	A-286 CRES	CR7650S
		CR7650
Protruding Head	A-286 CRES	CR7651S
		CR7651

MECHANICAL PROPERTIES

Diameter	Single Shear - lbs.		Tensile - lbs.	
	Alloy Steel 112KSI	A-286 95KSI	Alloy Steel	A-286
-04	—	1222	—	675
-05	2340	1980	1350	1150
-06	3450	2925	2100	1690
-08	5900	5000	3650	2900
-10	8500	7200	5200	4170

INSTALLATION TOOL SELECTION CHART

The tooling and pulling head combinations shown in the chart below will install the diameter MAXIBOLTS indicated by the shaded areas, in all grip lengths, head styles and materials. Cherry shift washer style only. (For "U" and "-" type MAXIBOLT installation tooling, please contact Cherry Aerospace at 714-545-5511 or at the address listed on the back cover of this catalog.)

Riveter Model	Pulling Capacity	Height Inches	Base Dia. Inches	Weight Lbs.	Pulling Head	Diameter (3)				
						1/8"	5/32"	3/16"	1/4"	5/16"
G704B	3136	11.0	4.9	4.5	H701B-456					
					H781-456					
					H782					
					H753A-456					
G747	2100	11.37	4.56	3.5	H701B-456					
					H781-456					
					H782					
					H753A-456					
G750A	3800	6.4	N/A	1.9	H750A-456					
					H781-456 (1)					
					H782(1)					
					H753A-456 (1)					
					H750A-5MB					
G83	3750	11.5	4.9	4.7	H750A-6MB					
					H701B-456 (2)					
					H83B-5MB					
G744	3800	12.6	6.25	7.0	H83B-6MB					
					H846A-456					
					H744-5MB					
G84	5750	13.25	6.25	7.7	H744-6MB					
G85D-S	6500	15.25	6.0	10.5	H84A-8MB					
G87D	9400	15.25	6.0	10.5	H652-8MB					

(1) Requires 750A-088 adapter. (2) Requires 744-300 adapter. (3) For 5/16" MAXIBOLT installation tooling contact Cherry Aerospace.

MAXIBOLT PLUS

Installation Tool	Pulling Head	Fastener Diameter
G83	H84B-568	-05, -06
G84	H84B-568	-05, -06, -08

DECIMAL EQUIVALENT CHART

NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL
—	.1	.0039	45	—	.0820	5	—	.2055	7/16	—	.4375
—	.2	.0079	44	—	.0860	4	—	.2090	29/64	—	.4531
—	.3	.0118	43	—	.0890	3	—	.2130	15/32	—	.4687
80	—	.0135	42	—	.0935	7/32	—	.2187	—	12.	.4724
79	—	.0145	3/32	—	.0937	2	—	.2210	31/64	—	.4844
1/64	—	.0156	41	—	.0960	1	—	.2280	1/2	—	.5000
—	.4	.0157	40	—	.0980	A	—	.2340	—	13.	.5118
78	—	.0160	39	—	.0995	15/64	—	.2344	33/64	—	.5156
77	—	.0180	38	—	.1015	—	6.	.2362	17/32	—	.5312
—	.5	.0197	37	—	.1040	B	—	.2380	35/64	—	.5469
76	—	.0200	36	—	.1065	C	—	.2420	—	14.	.5512
75	—	.0210	7/64	—	.1094	D	—	.2460	9/16	—	.5625
74	—	.0225	35	—	.1100	1/4	—	.2500	37/64	—	.5781
—	.6	.0236	34	—	.1110	E	—	.2500	—	15.	.5906
73	—	.0240	33	—	.1130	F	—	.2570	19/32	—	.5937
72	—	.0250	32	—	.1160	0	—	.2610	39/64	—	.6094
71	—	.0260	—	3.	.1181	17/64	—	.2656	5/8	—	.6250
—	.7	.0276	31	—	.1200	H	—	.2660	—	16.	.6299
70	—	.0280	1/8	—	.1250	1	—	.2720	41/64	—	.6406
69	—	.0292	30	—	.1285	—	7.	.2756	21/32	—	.6562
68	—	.0310	29	—	.1360	1	—	.2770	—	17.	.6693
1/32	—	.0312	28	—	.1405	K	—	.2810	43/64	—	.6719
—	.8	.0315	9/64	—	.1406	9/32	—	.2812	11/16	—	.6875
67	—	.0320	27	—	.1440	L	—	.2900	14/64	—	.7031
66	—	.0330	26	—	.1470	M	—	.2950	—	18.	.7087
65	—	.0350	25	—	.1495	19/64	—	.2969	23/32	—	.7187

NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL	NOM. SIZE	M/M	DECIMAL
—	.9	.0354	24	—	.1520	N	—	.3020	47/64	—	.7344
64	—	.0360	23	—	.1540	5/16	—	.3125	—	19.	.7480
63	—	.0370	5/32	—	.1562	—	8.	.3150	3/4	—	.7500
62	—	.0380	22	—	.1570	0	—	.3160	49/64	—	.7656
61	—	.0390	—	4.	.1575	P	—	.3230	25/32	—	.7812
—	1.	.0394	21	—	.1590	21/64	—	.3281	—	20.	.7874
60	—	.0400	20	—	.1610	0	—	.3320	51/64	—	.7969
59	—	.0410	19	—	.1660	P	—	.3390	13/16	—	.8125
58	—	.0420	18	—	.1695	11/32	—	.3437	—	21.	.8268
57	—	.0430	11/64	—	.1719	S	—	.3480	53/64	—	.8281
56	—	.0465	17	—	.1730	—	9.	.3543	27/32	—	.8437
3/64	—	.0469	16	—	.1770	T	—	.3580	55/64	—	.8594
55	—	.0520	15	—	.1800	23/64	—	.3594	—	22.	.8661
54	—	.0550	14	—	.1820	U	—	.3680	7/8	—	.8750
53	—	.0595	13	—	.1850	3/8	—	.3750	57/64	—	.8906
1/16	—	.0625	3/16	—	.1875	V	—	.3770	—	23.	.9055
52	—	.0635	12	—	.1890	W	—	.3860	29/32	—	.9062
51	—	.0670	11	—	.1910	25/64	—	.3906	59/64	—	.9219
50	—	.0700	10	—	.1935	—	10.	.3937	15/16	—	.9375
49	—	.0730	9	—	.1960	X	—	.3970	—	24.	.9449
48	—	.0760	—	5.	.1968	V	—	.4040	61/64	—	.9531
5/64	—	.0781	8	—	.1990	13/32	—	.4062	31/32	—	.9687
47	—	.0785	7	—	.2010	Z	—	.4130	—	25.	.9842
—	2.	.0787	13/64	—	.2031	27/64	—	.4219	63/64	—	.9844
46	—	.0810	6	—	.2040	—	11.	.4331	1	25.4	1.000



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