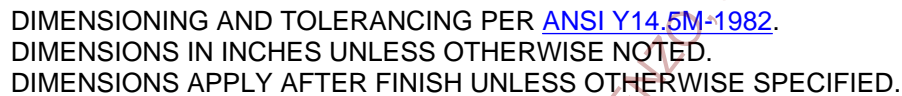


BCA	P	BDS	P							
NEW DESIGN APPROVAL: P=PARTIAL, F=FULL, N=NONE										



BOEING STANDARD NUMBER BACR15FP ① ②	NOMINAL DIAMETER	Ø A ±.004	B REF	C DEG		Ø D +.003 -.001	E ALUM		F MONEL	
				ALUM ± 1	MONEL ± 1.5		MAX	MIN	MAX	MIN
4	.1250	.225	.035			.140				
5	.1562	.286	.047	100	100.0	.173	.006	.002	.015	.005
6	.1875	.353	.063			.201				

CAGE CODE 81205

**RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING  
BOEING PART STANDARD**

BACR15FP  
SH 1 OF 10

FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

TABLE I RIVET DIMENSIONS AND REQUIREMENTS (CONTINUED)

BOEING STANDARD NUMBER BACR15FP 1 2	Ø P MAX	R MAX RADIUS	Ø S REF	Z MIN REF	INSTALLED STEM FLUSHNESS REQUIREMENTS 3		TENSILE STRENGTH (POUNDS-MIN)		
					ABOVE HEAD MAX (INCH)	BELOW HEAD MAX (INCH)	ALUMINUM SLEEVE	MONEL SLEEVE	
								NO CODE	"R" CODE
4	.143	.010	.081	.87	.010	.015	345	490	490
5	.176		.100	.94		.020	530	870	740
6	.205		.117				710	1180	1000

TABLE I RIVET DIMENSIONS AND REQUIREMENTS (CONTINUED)

BOEING STANDARD NUMBER BACR15FP 1 2	STEM RETENTION LOADS					
	PUSHOUT LOCKED STEM MINUS NON-LOCKED STEM (POUNDS-MIN)		PUSHOUT LOCKED STEM (POUNDS-MIN)		PUSHOUT UNINSTALLED RIVET (POUNDS-MIN)	
	NO CODE	"R" CODE	NO CODE	"R" CODE	NO CODE	"R" CODE
4	100	10	250	150	10	10
5	125		425	250		
6	150		600	450		

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BACR15FP SH 2

RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING  
BOEING PART STANDARD

BACR15FP SH 2

TABLE II RIVET GRIP DIMENSIONS AND SHEAR STRENGTH

Ø .1250							
GRIP CODE	GRIP		L +.000 -.030	K MAX	SHEAR STRENGTH (POUNDS-MIN)		
					ALUMINUM SLEEVE	MONEL SLEEVE	
	MIN	MAX				NO CODE	"R" CODE
1	.045	.062	.200	.45	---	---	---
2	.063	.125	.238	.45	480	800	574
3	.126	.187	.301	.52	614	954	784
4	.188	.250	.363	.58	741	1060	994
5	.251	.312	.426	.65	814		1205
6	.313	.375	.488	.71			1220
7	.376	.437	.551	.78			
8	.438	.500	.613	.84			
9	.501	.562	.676	.90			

TABLE II RIVET GRIP DIMENSIONS AND SHEAR STRENGTH (CONTINUED)

Ø .1562								
GRIP CODE	GRIP		L +.000 -.030	K MAX	SHEAR STRENGTH (POUNDS-MIN)			
					ALUMINUM SLEEVE		MONEL SLEEVE	
	MIN	MAX			NO CODE	"R" CODE	NO CODE	"R" CODE
2	.063	.125	.266	.47	---	---	---	---
3	.126	.187	.309	.53	815	815	1324	1010
4	.188	.250	.371	.60	997	977	1511	1270
5	.251	.312	.434	.66	1137	1135	1620	1530
6	.313	.375	.496	.72	1245	1245		1800
7	.376	.437	.559	.79				1865
8	.438	.500	.621	.85				
9	.501	.562	.684	.91				
10	.563	.625	.746	.98				
11	.626	.687	.809	1.04				

FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

TABLE II RIVET GRIP DIMENSIONS AND SHEAR STRENGTH (CONTINUED)

Ø .1875								
GRIP CODE	GRIP		L +.000 -.030	K MAX	SHEAR STRENGTH (POUNDS-MIN)		SHEAR STRENGTH (POUNDS-MIN)	
					ALUMINUM SLEEVE		MONEL SLEEVE	
	MIN	MAX			NO CODE	"R" CODE	NO CODE	"R" CODE
2	.073	.125	.265	.48	---	---	---	---
3	.126	.187	.328	.55	1005	1005	1684	1220
4	.188	.250	.390	.62	1200	1200	1900	1520
5	.251	.312	.453	.68	1388	1390	2119	1825
6	.313	.375	.515	.74	1579	1580	2190	2135
7	.376	.437	.578	.82	1685	1685		2440
8	.438	.500	.640	.89				2525
9	.501	.562	.703	.95				
10	.563	.625	.765	1.01				
11	.626	.687	.828	1.07				
12	.688	.750	.890	1.14				

NOTES

- 1 SEE USAGE AND APPLICATION FOR COMPLETE BOEING PART NUMBER.
- 2 GRIP CODE, SEE [TABLE II](#).
- 3 LOCK COLLAR SHALL BE FLUSH WITH THE TOP OF THE RIVET HEAD WITHIN +.005 TO -.000 WHEN INSTALLED (.020 COLLAR FLASH PERMISSIBLE).
- 4 HEAD MARKINGS SHALL BE VISIBLE AFTER INSTALLATION.
- 5 NON "R" CODE PARTS WHICH MEET THE "R" CODE REQUIREMENTS MAY BE RECEIVED AS "R" CODES (WITHOUT THE HEAD MARKING) UNTIL DECEMBER 1997 AND USED UNTIL DEPLETED.
- 6 CADMIUM PLATING OF SPINDLE OF "E" CODE RIVETS PROVIDES LUBRICITY AND IS NOT NECESSARY FOR CORROSION/GALVANIC PROTECTION AND CAN BE APPLIED AT MANUFACTURER'S OPTION.
- 7 RIVETS COVERED BY THIS STANDARD HAVE EITHER A SHEAR RING (INTEGRAL WITH THE STEM AND SAME MATERIAL) OR AN EXPANDER (SEPARATE COMPONENT OF MATERIAL SHOWN IN MATERIAL AND FINISH CODE).

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BACR15FP

SH 4

RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING  
BOEING PART STANDARD

BACR15FP

SH 4

**NOTES (CONTINUED)**

- 8➤ BACR15FP( )E( )R AND BACR15FP( )F( )R PARTS MANUFACTURED OR ASSEMBLED AFTER JUNE 30, 2005 SHALL BE CAPABLE OF PASSING SALT SPRAY TESTING AS SPECIFIED HEREIN. BACR15FP( )E( )R AND BACR15FP( )F( )R PARTS MANUFACTURED OR ASSEMBLED ON OR BEFORE JUNE 30, 2005 MAY BE PROCURED AND USED UNTIL DEPLETED.
- 9➤ HUCK INTERNATIONAL INC (TUCSON) IS NOW ALCOA FASTENING SYSTEMS-TUCSON. THIS WAS A NAME CHANGE ONLY. PARTS MANUFACTURED UNDER THE HUCK NAME MAY BE PROCURED AND USED UNTIL STOCKS ARE DEPLETED.
- 10➤ TEXTRON AEROSPACE FASTENERS IS NOW CHERRY AEROSPACE LLC. THIS WAS A NAME CHANGE ONLY. PARTS MANUFACTURED UNDER THE TEXTRON NAME MAY BE PROCURED AND USED UNTIL STOCKS ARE DEPLETED.
- 11➤ THE DRIVING ANVIL IS NOT PART OF FINAL INSTALLED ASSEMBLY. AFTER INSTALLATION, THE DRIVING ANVIL SHALL BE DISPOSED OF.

**PROCUREMENT SPECIFICATION**

[NAS1740](#) EXCEPT AS NOTED. STEM RETENTION LOADS, INSTALLED STEM FLUSHNESS, AND TENSILE STRENGTH SHALL MEET THE REQUIREMENTS IN [TABLE I](#). RIVET SINGLE SHEAR STRENGTH SHALL BE AS SPECIFIED IN [TABLE II](#). RIVET SHAVE TEST DOES NOT APPLY.

RAW MATERIAL ALLOY VERIFICATION SHALL MEET THE REQUIREMENTS PER [BPS-R-178](#).

RIVET SHANK EXPANSION SHALL MEET THE FOLLOWING REQUIREMENTS (QUALIFICATION ONLY): THE TEST RIVET PER [TABLE III](#) SHALL BE INSTALLED IN AN ALUMINUM COUPON AND STEEL SPLIT PLATE FIXTURE. COUPON THICKNESS AND HOLE SIZE AND PLATE THICKNESS AND HOLE SIZE SHALL BE AS SHOWN IN [TABLE III](#).

INSERT THE RIVET INTO THE ALUMINUM HEADSIDE COUPON. THE SHANK DIAMETER SHALL BE MEASURED AT THE FAYING SURFACE AND RECORDED.

INSTALL THE RIVET. AFTER INSTALLATION, THE PLATES SHALL BE SEPARATED FROM ONE ANOTHER AND FROM THE RIVET, LEAVING THE RIVET AND THE HEADSIDE COUPON TOGETHER. THE SHANK DIAMETER OF THE INSTALLED RIVET SHALL BE MEASURED AT THE FAYING SURFACE OF THE SPLIT PLATE AND THE SOLID HEADSIDE ALUMINUM COUPON.

THE DIFFERENCE BETWEEN THE TWO RECORDED MEASUREMENTS SHALL BE A MINIMUM OF .002. RIVETS WITH GRIP LENGTHS GREATER THAN THOSE LISTED IN [TABLE III](#) ARE NOT REQUIRED TO MEET THE SHANK EXPANSION REQUIREMENTS.

PROCUREMENT SPECIFICATION (CONTINUED)

CODE "E" AND "F" RIVETS SHALL BE CAPABLE OF PASSING A SALT SPRAY TEST PER [MIL-STD-1312-1](#) IN ACCORDANCE WITH [NASM1312-1](#), EXCEPT RIVETS SHALL BE TESTED AS INSTALLED IN AN ANODIZED 2024-T3 (CLAD OR UNCLAD) PANEL; TEST DURATION SHALL BE A MINIMUM OF 48 HOURS. HOLE SIZE REQUIREMENTS SHALL BE HOLE SIZE PER [NAS1740](#) AS FOLLOWS: 1/8 RIVET, .1460 ± .0005; 5/32 RIVET, .1800 ± .0005; 3/16 RIVET, .2090 ± .0005. PANEL THICKNESS SHALL BE AT MINIMUM GRIP (+ .010/- .000) PER [TABLE II](#). AT THE CONCLUSION OF THE TEST, THERE SHALL BE NO STRESS CORROSION CRACKING OF THE SLEEVE WHEN EXAMINED AT A MINIMUM OF 10X MAGNIFICATION.

SALT SPRAY TESTING IS REQUIRED FOR QUALIFICATION ONLY. A MINIMUM OF 8 PIECES SHALL BE TESTED FROM EACH VERIFICATION LOT.

TABLE III SHANK EXPANSION TEST REQUIREMENTS (QUALIFICATION ONLY)

BOEING STANDARD NUMBER BACR15FP	NOMINAL DIAMETER	RIVET GRIP DASH NUMBER	ALUMINUM HEADSIDE COUPON		STEEL SPLIT PLATE		TOTAL GRIP
			THICKNESS ± .002	HOLE SIZE ± .0005	THICKNESS ± .002	HOLE SIZE ± .001	
4	.1250	3	.098	.146	.062	.146	.160
5	.1562	4	.127	.178	.078	.180	.205
6	.1875	4	.156	.207	.094	.209	.250

MATERIAL AND FINISH

CODE "B":

- SLEEVE - 5056 ALUMINUM ALLOY PER [QQ-A-430](#) MATERIAL WITH [MIL-DTL-5541](#), CLASS 1A CLEAR, COLORLESS.
- STEM - 8740 STEEL PER [AMS6322](#) MATERIAL WITH CADMIUM PLATE PER [AMS-QQ-P-416](#), TYPE II, CLASS 2.
- LOCK COLLAR - A286 CRES PER [AMS5731](#) MATERIAL WITH NO FINISH. OPTIONAL; CADMIUM PLATE PER [AMS-QQ-P-416](#), TYPE II, CLASS 2.
- EXPANDER - C-1038 STEEL WITH CADMIUM PLATE PER [AMS-QQ-P-416](#) TYPE II, CLASS 2.


CODE "E":

8

- SLEEVE - 5056 ALUMINUM ALLOY PER [QQ-A-430](#) MATERIAL WITH [MIL-DTL-5541](#), CLASS 1A CLEAR, COLORLESS.

FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

**MATERIAL AND FINISH (CONTINUED)**

- STEM - 15-7PH CRES PER [AMS5657](#) OR A286 CRES PER [AMS5737](#)  
MATERIAL WITH CADMIUM PLATE PER [AMS-QQ-P-416](#), TYPE  
I, CLASS 2 OR PASSIVATE PER [AMS2700](#), LUBE IN  
ACCORDANCE WITH [NAS1740](#) 
- LOCK - A286 CRES PER [AMS5731](#) MATERIAL WITH NO FINISH.  
COLLAR OPTIONAL; CADMIUM PLATE PER [AMS-QQ-P-416](#), TYPE I,  
CLASS 2.
- EXPANDER - A286 CRES PER [AMS5737](#).
- CODE "F":  
SLEEVE - 5056 ALUMINUM ALLOY PER [QQ-A-430](#) MATERIAL WITH  
[MIL-DTL-5541](#), CLASS 1A, CLEAR, COLORLESS.
- STEM - 15-7PH CRES PER [AMS5657](#) OR A286 CRES PER [AMS5737](#)  
MATERIAL, WITH PASSIVATION PER [AMS2700](#), LUBE IN  
ACCORDANCE WITH [NAS1740](#).
- LOCK - A286 CRES PER [AMS5731](#) MATERIAL WITH NO FINISH.  
COLLAR
- EXPANDER - A286 CRES PER [AMS5737](#).
- CODE "M":  
SLEEVE - MONEL PER [QQ-N-281](#) MATERIAL WITH NO FINISH.
- STEM - 15-7PH CRES PER [AMS5657](#) OR A286 CRES PER [AMS5737](#)  
MATERIAL WITH NO FINISH.
- LOCK - A286 CRES PER [AMS5731](#) MATERIAL WITH NO FINISH.  
COLLAR
- EXPANDER - MONEL PER [QQ-N-281](#).
- CODE "MP":  
SLEEVE - MONEL PER [QQ-N-281](#) MATERIAL WITH [BMS10-85](#) FINISH.
- STEM - 15-7PH CRES PER [AMS 5657](#) OR A286 CRES PER [AMS5737](#)  
MATERIAL WITH NO FINISH.
- LOCK - A286 CRES PER [AMS5731](#) MATERIAL WITH NO FINISH.  
COLLAR
- EXPANDER - MONEL PER [QQ-N-281](#).

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BACR15FP

SH 7

**RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING  
BOEING PART STANDARD**

BACR15FP




SH 7

FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

## MARKING

MARK RIVET HEAD WITH MANUFACTURER'S SYMBOL/INSIGNIA PER [TABLE IV](#), PER [MIL-HDBK-57](#) OR REGISTERED WITH THE U.S. PATENT AND TRADEMARK OFFICE (PTO) OF THE U.S. DEPARTMENT OF COMMERCE, GRIP IDENTIFICATION, CODING FOR STEM AND SLEEVE MATERIAL PER [TABLE V](#). MARKING DEPRESSED .010 MAXIMUM, ARRANGEMENT AS ILLUSTRATED ON GRAPHIC ABOVE [TABLE I](#). "R" CODED PARTS WILL BE MARKED WITH A DASH UNDER OR TO THE RIGHT SIDE OF THE GRIP NUMBER ON THE HEAD, i.e., "6" OR "6-".


**TABLE IV MANUFACTURER'S HEAD MARKING  
SYMBOLS**

MANUFACTURER	SYMBOL/INSIGNIA
ALLFAST	
CHERRY	
ALCOA FASTENING SYSTEMS	

**TABLE V MANUFACTURER'S HEAD MARKING  
MATERIALS**

HEAD MARKING		
SYMBOLS	MATERIALS	
	STEM	SLEEVE
"+"	CRES	ALUMINUM
"M"	CRES	MONEL
NONE	8740	ALUMINUM

## PROCUREMENT

ALCOA FASTENING SYSTEMS-TUCSON, 3724 E COLUMBIA ST, TUCSON, AZ 85714-3410  
(CAGE CODE 0HDW7) 

ALLFAST FASTENING SYSTEMS INC, 15200 DON JULIAN RD, CITY OF INDUSTRY CA  
91745-1001 (CAGE CODE 53551)

CHERRY AEROSPACE LLC, 1224 E WARNER AVE, SANTA ANA, CA 92705-5414 (CAGE CODE  
11815) 

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BACR15FP

SH 8

**RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING**

**BOEING PART STANDARD**

BACR15FP

SH 8



FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

## PROCUREMENT (CONTINUED)

THE MANUFACTURERS LISTED AND THEIR AUTHORIZED DISTRIBUTORS ARE THE ONLY APPROVED SOURCES FOR THE ABOVE QUALIFIED PRODUCTS. NO CHANGES IN PRODUCT DESIGN, BASIC METHODS OF MANUFACTURE, PLANT SITE OR QUALITY LEVEL SHALL BE MADE WITHOUT PRIOR NOTIFICATION AND PRIOR APPROVAL IN WRITING FROM THE BOEING COMPANY. MANUFACTURERS OF COMPETITIVE PRODUCTS MAY APPLY TO A SUPPLIER MANAGEMENT DEPARTMENT OF THE BOEING COMPANY FOR QUALIFICATION.

THIS IS A MANUFACTURER-DESIGNED PRODUCT. BOEING MAKES NO REPRESENTATION WHATEVER REGARDING PATENT OR ANY OTHER RIGHTS AFFECTING THE PRODUCT. THE LISTING OF ANY SUPPLIER DOES NOT IMPLY ANY DETERMINATION BY THE BOEING COMPANY OR BY ANY OTHER LISTED MANUFACTURER AS TO THE RIGHTS OF SUCH MANUFACTURER.

## USAGE AND APPLICATION INFORMATION

FOR BACR15FP()E()AND BACR15FP()F() RIVETS, MAGNETIC PERMEABILITY IS LESS THAN 55 (AIR - 1.0) FOR A FIELD STRENGTH  $H = 200$  OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR PER ASTM A 342 OR EQUIVALENT.

SEE [BACD2074](#) FOR FASTENER CODES.

### CODING

FIRST DASH NUMBER DESIGNATES NOMINAL DIAMETER IN .03125 INCREMENTS, PER [TABLE I](#).

LETTERS "B", "E", "F", "M" AND "MP" FOLLOWING FIRST DASH NUMBER DESIGNATE MATERIAL AND FINISH OF SLEEVE, STEM, LOCK COLLAR, AND EXPANDER. SEE MATERIAL AND FINISH SECTION.

SECOND DASH NUMBER DESIGNATES MAXIMUM GRIP LENGTH IN .0625 INCREMENTS.

LETTER "R" FOLLOWING SECOND DASH NUMBER DESIGNATES REDUCED LOAD CAPABILITIES (MANDATORY FOR CODE F).

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**BACR15FP**

**SH 9**

**RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING**

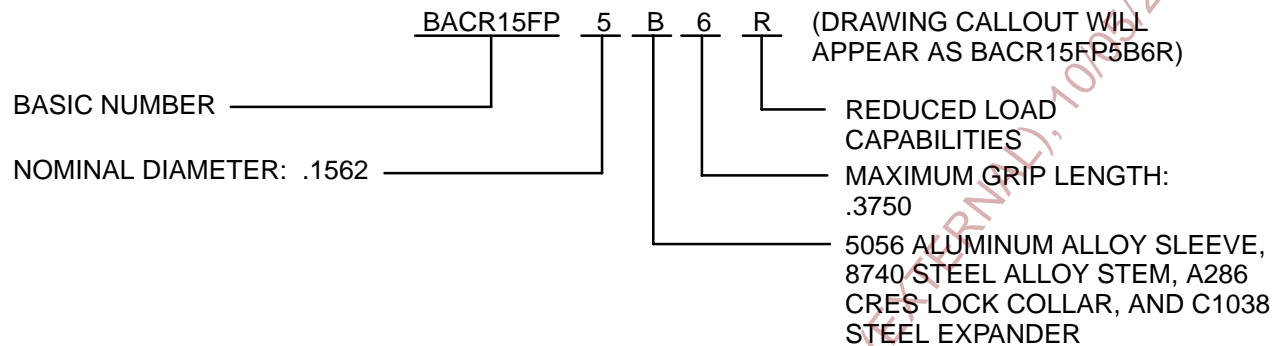
**BOEING PART STANDARD**

**BACR15FP**

**SH 9**

FOR STATUS OF INACTIVATION  
SEE APPLICABILITY BLOCK

#### EXAMPLE OF PART NUMBER



SEE [D-590-PREFACE](#) FOR INACTIVATION DEFINITIONS. SEE [00000-D-590-INFO](#) FOR LINKS TO SUPERSESSION CLASS DEFINITIONS AND FAQ.

#### INACTIVATION APPLICABILITY

- BCA
- BACR15FP( )(B,E,M,MP)( ) ARE INACTIVE FOR DESIGN AND PROCUREMENT.  
BACR15FP( )(B,E,M,MP)( )R ARE CLASS I SUPERSESSIONS, RESPECTIVELY. [5]
  - BACR15FP( )E( )R IS INACTIVE FOR DESIGN AND PROCUREMENT.  
BACR15FP( )F( )R IS A CLASS II SUPERSESSION.  
EFFECTIVE 15-JUN-2010.
- BH
- BACR15FP(ALL CODES) ARE INACTIVE FOR DESIGN AND PROCUREMENT.  
NO SUPERSEDING PARTS.
- BDS  
(EXCEPTION: BH)
- BACR15FP( )E( ) AND BACR15FP( )E( )R ARE INACTIVE FOR DESIGN AND PROCUREMENT.  
BACR15FP( )F( )R IS A CLASS II SUPERSESSION RESPECTIVELY.  
EFFECTIVE 15-JUN-2010.

DATE 12-JAN-1977 REV (AC) 12-DEC-2013

CAGE CODE 81205

**BACR15FP**  
SH 10

**RIVET,  
BLIND, 100 DEG FLUSH HEAD,  
LOCKED STEM,  
SELF-PLUGGING  
BOEING PART STANDARD**

**BACR15FP**  
SH 10