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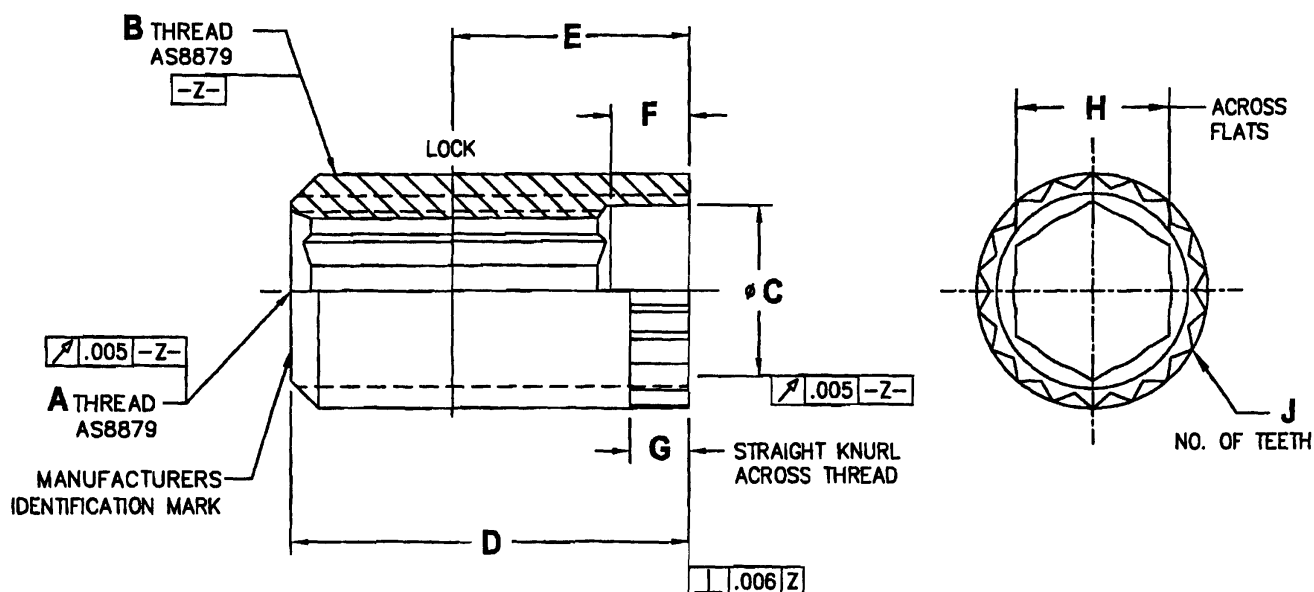


FIGURE 1

TABLE 1: PARTS DIMENSIONS AND WEIGHTS

ROSAN PART NUMBER	S.B.A.C. PART NUMBER REF	SAE PART NUMBER REF	A THREAD	B THREAD MODIFIED MINOR DIA	
				THREAD SIZE	MINOR DIA MAX
SRQB192L0074	AS52790	AS3505-01	.1900-32UNJF-3B	.2500-28UNJF-3A	.2170
SRQB258L0074	AS52791	AS3505-02	.2500-28UNJF-3B	.3125-24UNJF-3A	.2785
SRQB314L0074	AS52792	AS3505-03	.3125-24UNJF-3B	.3750-24UNJF-3A	.3405
SRQB374L0074	AS52793	AS3505-04	.3750-24UNJF-3B	.4375-20UNJF-3A	.4010
SRQB430L0074	U760329	AS3505-05	.4375-20UNJF-3B	.5000-20UNJF-3A	.4630
SRQB500L0074	U760330	AS3505-06	.5000-20UNJF-3B	.5625-24UNJF-3A	.5290

ROSAN PART NUMBER	$\phi$ C	D	E	F	G	$\phi$ H	J	WEIGHT APPROX lbs/1000 PCS
	$\pm .003$	$\pm .010$	REF	$\pm .005$	$\pm .005$	REF		
SRQB192L0074	.196	.475	.28	.090	.075	.157	20	2.175
SRQB258L0074	.256	.595	.35	.090	.075	.210	24	3.645
SRQB314L0074	.318	.720	.42	.090	.075	.266	29	5.667
SRQB374L0074	.382	.875	.50	.120	.105	.322	34	7.660
SRQB430L0074	.444	1.000	.58	.120	.105	.377	39	10.808
SRQB500L0074	.507	1.125	.64	.120	.105	.439	44	15.556

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89-06-28

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DAF NUMBER

97908

ARCONIC FASTENING SYSTEMS



ARCONIC

Arconic Fastening Systems

Rosan Products

3018 W. Lomita Blvd.  
Torrance, California 90505-5103

TITLE:

INSERT - THIN WALL,  
LONG, SELF LOCKING, 1025°F  
SILVER PLATEDUNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES &  
ASME Y14.5M TOLERANCESANGLES  
DECIMALS=  $\pm 3^\circ$   
.01 =  $\pm .02$   
.001 =  $\pm .010$ 

CURRENT DESIGN ACTIVITY:

CAGE CODE: 83324

SALES DRAWING NO.

SRQB(L0074  
SERIES

SHEET 1 OF 6

MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE  
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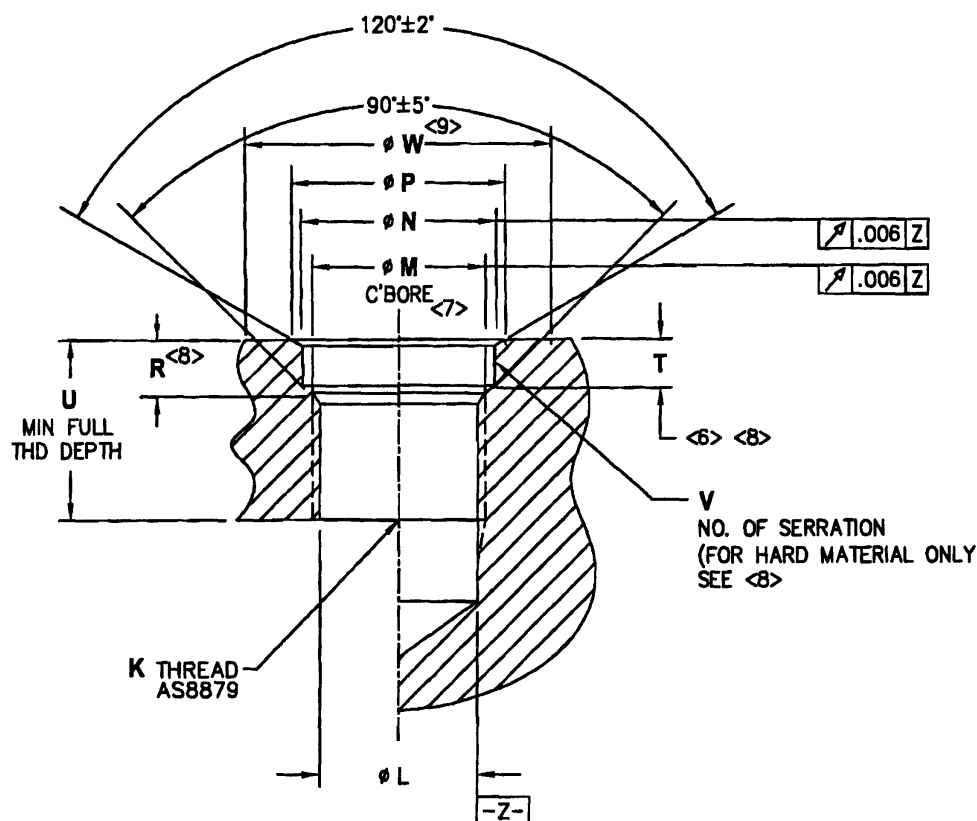


FIGURE 2

TABLE 2: HOLE PREPARATION DIMENSIONS

PART NUMBER	K THREAD -3B	$\phi L$ TAP HOLE	$\phi M$ +.005 -.000	$\phi N$ SERRATION MAJOR DIA +.003 -.002	P $\pm .006$	R C'BORE DEPTH $\langle 8 \rangle$ $\pm .005$	T SERRATION DEPTH $\langle 8 \rangle$ $\pm .010$
SRQB192L0074	.2500-28UNJF	.220-.225	.249	.266	.297	.082	.077
SRQB258L0074	.3125-24UNJF	.280-.285	.311	.336	.364	.082	.077
SRQB314L0074	.3750-24UNJF	.342-.347	.374	.402	.431	.082	.077
SRQB374L0074	.4375-20UNJF	.403-.408	.436	.459	.486	.113	.108
SRQB430L0074	.5000-20UNJF	.467-.472	.499	.525	.553	.113	.108
SRQB500L0074	.5625-24UNJEF	.530-.535	.561	.582	.612	.113	.108

PART NUMBER	U MIN	V	$\phi W$ BOSS DIA $\langle 9 \rangle$ MIN	STEP DRILL	WOBBLE BROACH	SERRATION GAGE
SRQB192L0074	.510	20	.490	SR19D	SRPBT19WBA	SR19HSG
SRQB258L0074	.630	24	.550	SR25D	SRPBT25WBA	SR25HSG
SRQB314L0074	.755	29	.620	SR31D	SRPBT31WBA	SR31HSG
SRQB374L0074	.910	34	.680	SR37D	SRPBT37WBA	SR37HSG
SRQB430L0074	1.035	39	.740	SR43D	SRPBT43WBA	SR43HSG
SRQB500L0074	1.160	44	.800	SR50D	SRPBT50WBA	SR50HSG

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87008

CURRENT DESIGN ACTIVITY:



ARCONIC

Arconic Fastening Systems

**Rosan Products**  
3018 W. Lomita Blvd.  
Torrance, California 90505-5103

TITLE:

INSERT - THIN WALL,  
LONG, SELF LOCKING, 1025°F  
SILVER PLATED

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES &  
ASME Y14.5M TOLERANCES:

ANGLES  
DECIMALS  
XX =  $\pm .02$   
XXX =  $\pm .010$

CURRENT DESIGN ACTIVITY:

CAGE CODE: 83324

SALES DRAWING NO.

SRQB( )L0074  
SERIES

SHEET 2 OF 6

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## NOTES:

1. MATERIAL: INCONEL 718 PER AMS 5662.
2. HEAT TREAT: 37-43 HRc.
3. FINISH:
  - a. INTERNAL SURFACES: SILVER PLATE PER AMS 2411, .0002 MIN THICKNESS.
  - b. EXTERNAL SURFACES: PASSIVATE PER AMS 2700.
 DIMENSIONS MET AFTER PLATING.
4. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36. REQUIREMENTS PER ASME B46.1. SURFACES TO BE 125 MICROINCH R<sub>a</sub>, EXCEPT THREADS TO BE 63 MICROINCH R<sub>a</sub> AND KNURL TO BE 250 MICROINCH R<sub>a</sub>.
5. BREAK SHARP EDGES .015 MAX.
- <6> CHIP REMOVAL REQUIRED AFTER BROACHING SERRATIONS.
- <7> THREAD MARKS PERMISSIBLE IN COUNTERBORE AREA.
- <8> FOR HARD MATERIALS ABOVE 187 BHN (3000 kgf AND 10mm BALL) E.G. STEEL, NICKEL, TITANIUM, ETC. A SERRATED C'BORE IS REQUIRED IN THE INSTALLATION HOLE. FOR SOFT LIGHT YELLOW MATERIALS NOT EXCEEDING 187 BHN (3000 kgf LOAD AND 10mm BALL) E.G. ALUMINIUM, MAGNESIUM, ETC. USE A PLAIN C'BORE IN THE INSTALLATION HOLE.
- <9> THE RECOMMENDED BOSS DIAMETER WILL ALSO DEPEND ON COMPONENT APPLICATION, METHOD OF MANUFACTURE, AND ALLOWANCES FOR SALVAGE.
10. PERFORMANCE REQUIREMENTS PER S.B.A.C SPECIFICATION NO. TS138, JES256 AND SAE PROCUREMENT SPECIFICATION NO AS3506.

INSTALLATION AND REMOVAL PROCEDURE:

1. GENERAL DESIGN INFORMATION:
  - 1.1 THESE SELF LOCKING INSERTS SHALL HAVE KNURLED AREAS INDENTED INTO PARENT MATERIAL TO PREVENT ROTATIONAL MOVEMENT DURING SERVICE AND WHILE ASSEMBLING OR REMOVING THE MATING BOLT.
  - 1.2 THE SRQB( )L0074 LONG INSERT SERIES ARE PRIMARILY DESIGNED FOR USE IN SOFT LIGHT ALLOY MATERIALS (E.G. ALUMINIUM, MAGNESIUM, ETC.). FOR APPLICATION IN HARD MATERIALS (E.G. STEELS, NICKEL, TITANIUM, ETC.) USE SRQ( )L0024 SHORT INSERT SERIES, AT 1025° MAXIMUM OPERATING TEMPERATURE..
2. INSTALLATION OF INSERT
  - 2.1 APPLY A CORROSION PROTECTIVE COATING IN THE PREPARED HOLE IF APPLICABLE.
  - 2.2 INSERTS INSTALLED IN STEEL, HEAT RESISTING ALLOY OR TITANIUM ALLOY COMPONENTS MAY BE LIGHTLY SMEARED EXTERNALLY WITH CLEAN ENGINE OIL (I.E. ANY OF THE RECOGNIZED OILS USED FOR THE ENGINE LUBRICATION SYSTEM).
  - 2.3 ENGAGE THE HEX OF APPLICABLE DRIVE WRENCH PER TABLE 3 INTO INSERT AND WRENCH INSERT INTO THE HOLE TO .010 TO .020 DEPTH AS SHOWN IN FIGURE 3.

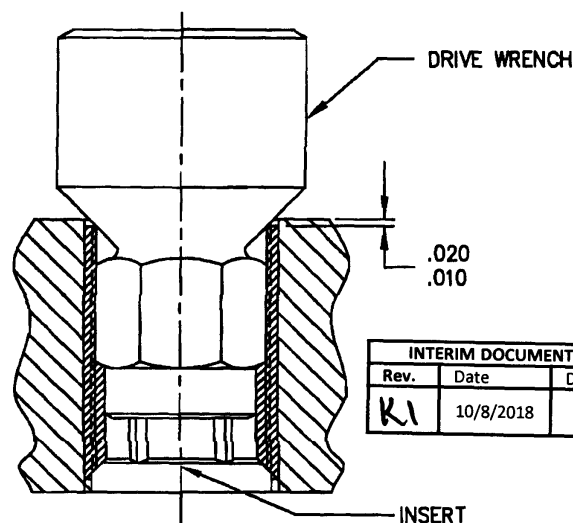



FIGURE 3

INSERT PART NUMBER	DRIVE WRENCH NUMBER
SRQB192L0074	SR19WA
SRQB258L0074	SR25WA
SRQB314L0074	SR31WA
SRQB374L0074	SR37WA
SRQB430L0074	SR43WA
SRQB500L0074	SR50WA

TABLE 3: DRIVE WRENCH

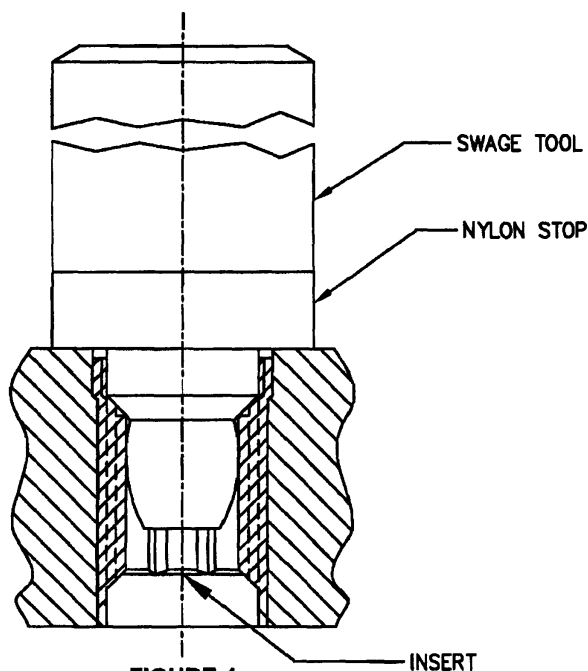
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Rev.	Date	DAF#
K1	10/8/2018	117431

APPROVED DATE 89-06-28	CURRENT DESIGN ACTIVITY:  <b>ARCONIC</b> Arconic Fastening Systems	TITLE: INSERT - THIN WALL, LONG, SELF LOCKING, 1025°F SILVER PLATED	CURRENT DESIGN ACTIVITY: CAGE CODE: 83324
REV. LETTER AND DATE K 8/12/11	<b>Rosan Products</b> 3018 W. Lomita Blvd. Torrance, California 90505-5103	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	SALES DRAWING NO.
DAF NUMBER 07900		ANGLES DECIMALS XX = ±.3° XXX = ±.02° XXX = ±.010	SRQB( )L0074 SERIES
			SHEET 3 OF 6

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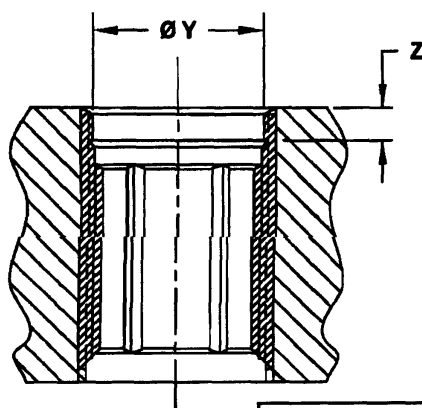
- 2.4 CAUTION: WHEN A SERRATED COUNTERBORE IS USED, ENSURE THAT THE KNURLS AROUND THE INSERT LINE UP WITH THE COUNTERBORE SERRATIONS..
- 2.5 BEFORE SWAGING, ENSURE STRUCTURE IS SUFFICIENTLY SUPPORTED. POSITION APPLICABLE SWAGE TOOL PER TABLE 4 INTO INSERT AND APPLY A DOWNWARD FORCE SUFFICIENT TO BOTTOM THE NYLON STOP AGAINST THE PARENT MATERIAL AS SHOWN IN FIGURE 4. THE INSERT IS NOW SWAGED AND LOCKED.
- 2.6 DETAIL INSTALLATION REQUIRMENTS OF THESE INSERTS ARE DESCRIBED IN AS3507.

**FIGURE 4**

INSERT PART NUMBER	SWAGE TOOL NUMBER
SRQB192L0074	SRQ19SA
SRQB258L0074	SRQ25SA
SRQB314L0074	SRQ31SA
SRQB374L0074	SRQ37SA
SRQB430L0074	SRQ43SA
SRQB500L0074	SRQ50SA

**TABLE 4: SWAGE TOOL****3. INSPECTION AND GAUGING****3.1 AFTER SWAGE INSPECTION**


AFTER THE INSERT HAS BEEN SWAGED AND THE NYLON STOP WASHER HAS CONTACTED THE PARENT MATERIAL SURFACE, THE SWAGED INSERT SHALL CONFORM TO THE DIMENSIONAL REQUIRMENTS OF FIGURE 5 AND TABLE 5.

**FIGURE 5**

INSERT PART NUMBER	Ø Y MIN	Z ±.005
SRQB192L0074	.209	.072
SRQB258L0074	.278	.070
SRQB314L0074	.343	.084
SRQB374L0074	.406	.091
SRQB430L0074	.468	.095
SRQB500L0074	.533	.095

**TABLE 5: INSPECTION DIMENSIONS**

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REV. LETTER AND DATE K 8/12/11	<b>Rosan Products</b> 3018 W. Lomita Blvd. Torrance, California 90505-5103	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES	SALES DRAWING NO.
DAF NUMBER 87808		ANGLES DECIMALS = ±3° XX = ±.02 XXX = ±.010	SRQB(L0074 SERIES
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## 3.2 AFTER SWAGE GAGING (RECOMMENDED METHOD):

AFTER THE INSERT HAS BEEN SWAGED, USE THE APPROPRIATE GAGE PER FIGURE 6 AND TABLE 6. INSERT THE "GO" END ("G") OF THE GAGE INTO THE COUNTERBORE OF THE INSERT. THE SHOULDER OF THE GAGE MUST REST FLUSH WITH THE FACE OF THE PARENT MATERIAL, THIS INDICATES THAT THE INSERT HAS BEEN SUCCESSFUL SWAGED, OTHERWISE, THE INSTALLATION IS NOT ACCEPTABLE (SEE FIGURE 7). NOW INSERT THE "NO GO" END ("N") OF THE GAGE INTO THE COUNTERBORE. THE SHOULDER MUST NOW BE CLEAR OF THE PARENT MATERIAL SURFACE TO INDICATE THE INSERT HAS NOT BEEN DRIVEN TOO DEEP, OTHERWISE, THE INSTALLATION IS NOT ACCEPTABLE (SEE FIGURE 8). WHEN BOTH "GO" AND "NO GO" CONDITIONS ARE ACCEPTABLE, THE INSTALLATION IS CORRECT AND THE INSERT IS READY FOR USE.

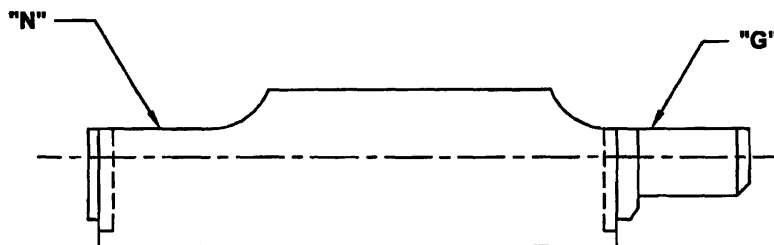


FIGURE 6

INSERT PART NUMBER	AFTER SWAGE GAGE NUMBER
SRQB192L0074	SRQ19GSDA
SRQB258L0074	SRQ25GSDA
SRQB314L0074	SRQ31GSDA
SRQB374L0074	SRQ37GSDA
SRQB430L0074	SRQ43GSDA
SRQB500L0074	SRQ50GSDA

TABLE 6: SWAGE GAGE

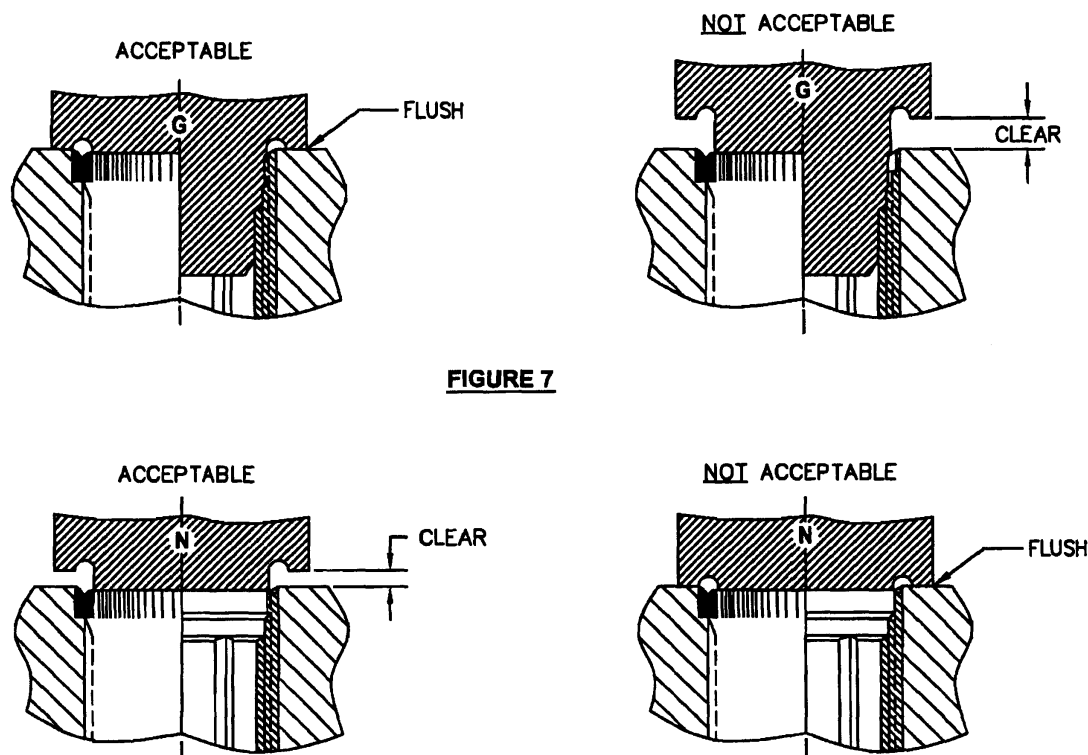


FIGURE 7

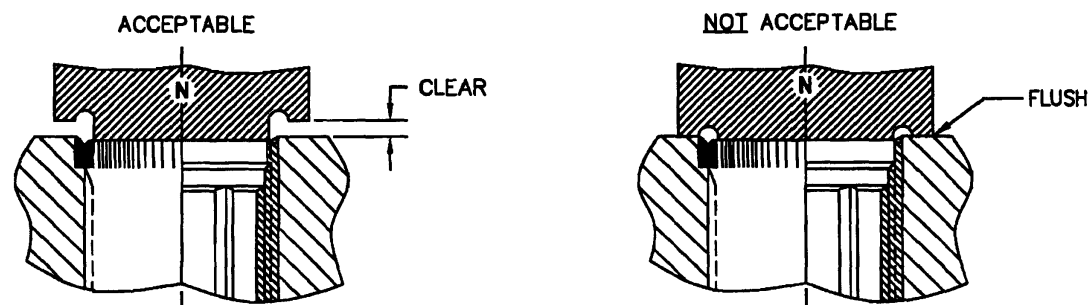



FIGURE 8

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APPROVED DATE 89-06-28		 <b>ARCONIC</b> Arconic Fastening Systems <i>Rosan Products</i> 3018 W. Lomita Blvd. Torrance, California 90505-5103	TITLE: INSERT - THIN WALL, LONG, SELF LOCKING, 1025°F SILVER PLATED	CURRENT DESIGN ACTIVITY: CAGE CODE: 83324	
REV. LETTER AND DATE K 8/12/11				SALES DRAWING NO.	
DAF NUMBER 97966		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	ANGLES DECIMALS .5" = .5" .01" = .01" .001" = .001"	SRQB( )L0074 SERIES SHEET 5 OF 6	

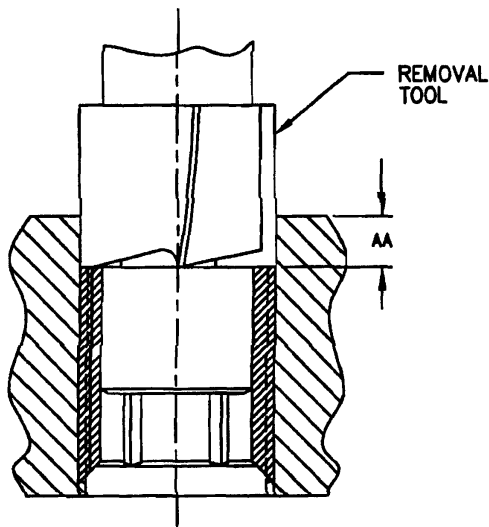
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**4. REMOVAL OF INSERT:**

- 4.1 POSITION THE PILOT OF APPLICABLE TOOL PER TABLE 7 INTO INSERT AND DRILL DOWN TO DEPTH SHOWN IN FIGURE 9, TABLE 7.

**FIGURE 9**


INSERT PART NUMBER	REMOVAL TOOL	AA MAX
SRQB192L0074	SR19R	.101
SRQB258L0074	SR25R	.101
SRQB314L0074	SR31R	.101
SRQB374L0074	SR37R	.133
SRQB430L0074	SR43R	.133
SRQB500L0074	SR50R	.133

**TABLE 7: REMOVAL TOOL AND DRILL DEPTH**

- 4.2 USE APPLICABLE DRIVE WRENCH PER TABLE 3 TO BACK OUT THE REMAINING PORTION OF INSERT.  
 4.3 CLEAN OUT AND REINSPECT HOLE, THEN INSTALL NEW INSERT.

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REV. LETTER AND DATE K 8/12/11			SALES DRAWING NO.
DAF NUMBER 97908			SRQB(L)0074 SERIES  SHEET 6 OF 6

ANGLES  
DECIMALS

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 .XX = ±.02  
 .XXX = ±.010