

1. Introduction

1.1 Involute splines shall be designed, manufactured and inspected in accordance with ANSI B92.1 Involute Splines and Inspection.

1.2 The term "involute serration", formerly applied to involute splines with 45° pressure angles, has been deleted. The term "serration" will no longer apply to splines covered by this document.

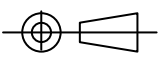
2. Preferred splines. The preferred spline sizes in regard to spline pitch and the number of teeth are listed in Table I. These sizes were selected to cover essentially all airframe applications. The type of fit is side fit, in which the mating members contact the sides of the teeth only; major and minor diameters are clearance dimensions. These preferred sizes apply to both internal and external splines.

2.1 Unusual applications requiring spline sizes not listed in this document should be designed in accordance with ANSI B92.1.

TABLE I – PREFERRED SPLINE SIZES

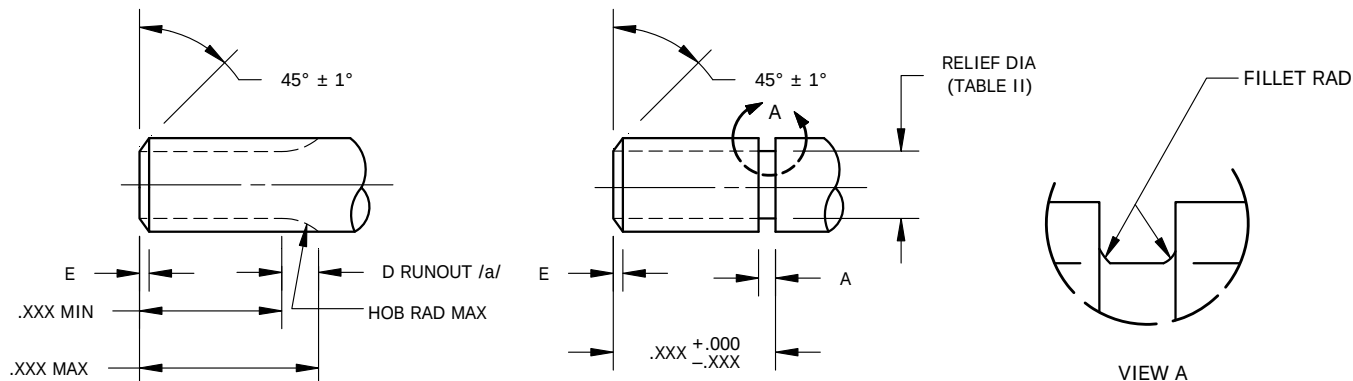
Spline Pitch	N Number of Teeth	ØD Pitch	ØD _b Base	Applicable Spline Data Table No. per ANSI B92.1
40/80	39	.9750	.6894	59
	44	1.1000	.7778	
	49	1.2250	.8662	
	54	1.3500	.9546	
	59	1.4750	1.0430	
48/96	26	.5417	.3830	60
	29	.6042	.4272	
	32	.6667	.4714	
	35	.7292	.5156	
	38	.7917	.5598	
	41	.8542	.6040	
64/128	44	.9167	.6482	61
	19	.2969	.2100	
	23	.3594	.2541	
	27	.4219	.2983	
80/160	31	.4844	.3425	62
	11	.1375	.0972	
	14	.1750	.1237	
	16	.2000	.1414	
	19	.2375	.1679	

④ COMPLETELY REVISED

THIRD ANGLE PROJECTION		CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 4
PROCUREMENT SPECIFICATION NONE	TITLE INVOLUTE SPLINES, 45° PRESSURE ANGLE, LOOSE FIT		CLASSIFICATION STANDARD PRACTICE
		④	NAS 540 SHEET 1 OF 6

3. External (shaft details)

3.1 Where possible, to facilitate manufacturing, the shaft ends shown in Figures 1 and 2 should be optional to each other.



/a/ Dimension "D" is used to determine overall length of spline and is not recommended for drawing callout. See Table II for "D" values.

(b) Values for dimensions "E" and "A" shown in Table II.

FIGURE 1 – PRODUCED ON HOBBING MACHINE

FIGURE 2 – PRODUCED ON GEAR SHAPER

3.2 Design precaution shown in Figures 3 & 4 should be considered where a flange or other restriction is required at the end of spline.

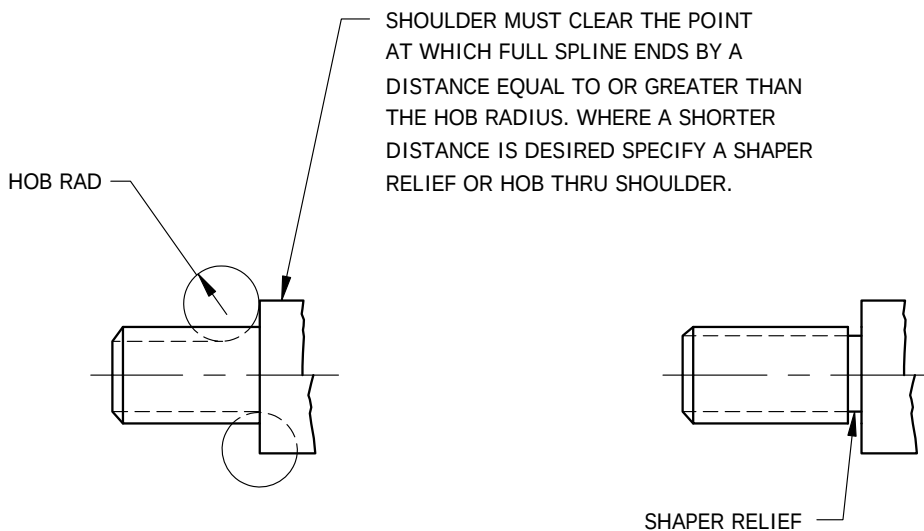


FIGURE 3 – PRODUCED ON HOBBING MACHINE

FIGURE 4 – PRODUCED ON GEAR SHAPER

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE.

FORM 09-01

④ COMPLETELY REVISED

REVISION
4
NAS 540
SHEET 2



Documents

Document Sharing Hub