



*Svenska Aeroplan Aktiefolaget*

LINKÖPING  
SWEDEN

# service bulletin

Date June 1959

No. 91. 6. 016

**AIRCRAFT SAAB SAFIR 91B, 91B-2 and 91C.**

**SUBJECT: Tolerances for Hartzell propellers used on above mentioned aircraft.**

**REASON: Completing of Hartzell Hydro-Selective Propeller Manual.**

Hartzell Propeller. Inc., has issued a table of tolerances for the HC-12x20 propeller, which is reprinted on next page. Furthermore SAAB has received the following information in a letter from Hartzell: "The torque used on the shank lag screws is 5-7 ft. lb. In the event the threads in the hole become stripped out, we recommend using a 5/16" screw and retapping the hole to suit"

.Please note that shank lag screws are used on plastic blades only.

**TABLE OF WEAR TOLERANCES**  
**Model HC-12x20-7, 8/8433, 8428, 8427**

Item No.	Part or Description of Measurement	Specified		Replace if dimension is above or below	
		Max.	Min.	Max.	Min.
1.	A-158 Pilot Tube O. D. (Standard size)	1.4990	1.4987	--	1.4977
1a.	A-158 Pilot Tube O. D. (.005 oversize)	1.5040	1.5037	--	1.5027
1b.	A-158 Pilot Tube O. D. (.010 oversize)	1.5090	1.5087	--	1.5077
2.	Distance pilot tube extends beyond hub	3 3/4 + 1/16	3 3/4 - 1/16	3 3/4 + 1/8	--
3.	Pilot tube hole in plastic blade I. D. (Std size)	I 1.5043 <sup>±.0014</sup>	1.502 <sup>I 38.1502</sup>	1.507 <sup>I 38.2228</sup>	--
3a.	Pilot tube hole in plastic blade I. D. (.005 oversize)	II 1.5093 <sup>±.0014</sup>	1.507 <sup>II 38.2228</sup>	1.512 <sup>II 38.4048</sup>	--
3b.	Pilot tube hole in plastic blade I. D. (.010 oversize)	III 1.5143 <sup>±.0014</sup>	1.512 <sup>III 38.4048</sup>	1.517 <sup>III 38.5318</sup>	--
4.	Pilot tube hole in aluminum blade I. D. (Std. size)	1.5015	1.5005	1.5030	--
5.	Piston guide collar bushings I. D.	.510	.508	.515	--
6.	B-167 Valve body hole I. D.	.4962	.4960	.4970	--
7.	A-168 Valve spool O. D.	.4957	.4954	--	.4950
8.	A-155 Hub shaft bushing	2.063	2.062	--	--
9.	Balance tolerance	1 Slug A-48			
10.	Blade track (plastic)	± 1/8 or 1/4 difference			
10a.	Blade track (aluminum)	± 1/16 or 1/8 difference			
11.	Blade end play	0 - 1/16			
12.	Fore and aft movement blade tip (plastic)	0 - 3/16	No grease		
12a.	Fore and aft movement blade tip (aluminum)	0 - .10	No grease		

Plastic blade repair tolerances: 5 % below blade specifications for blade thickness and width.

Hartzell Propeller, Inc.  
 Piqua, Ohio  
 November 17, 1958