October 1, 1974

TO: Mr. C. H. Kaman

FROM: Materials & Process Engineering - A. L. Belbruno

SUBJECT: Top Deflection History - Graphite #12

Graphite #12 - Contoured, 1 layer of birch veneer sanded down to .025" @ 45°. T 035

Condition	Date	k	
Top without bridge or bracing.	9-3-74	.81	
Top with bridge in place with tape	9-3-74	.21	
Top bonded to bowl with bridge and bracing	9-30-74	.160	(Strings tight)
		.169	(Strings loose).

A. L. Belbruno

cc: C. McDonough
L. Pickett

#12-4 thin contoured carbon (1 @ 45°) Clef holes (11.6□")

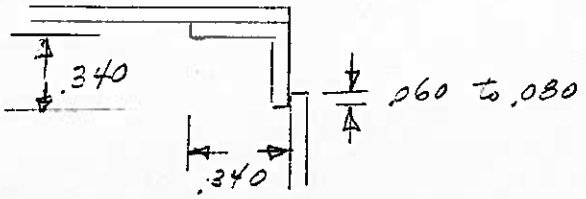
	RL	SN	K	FF
2nd test 11/21/74 CMcD – bowl patch on braces carved further to make #12-4	.121/.114	.061/.031 see data	.058 tight	
#12-3 braces carved down to make #12-3 A^b/103~			.054	103~
#12-2 1st test 11/20/74 CMcD – bowl patch on new bracing to make #12-2	.105	.035	.045 tight	
#12-1			.169/.160	

11/20/74

#12-1 carbon – super thin top, contoured w/clef holes

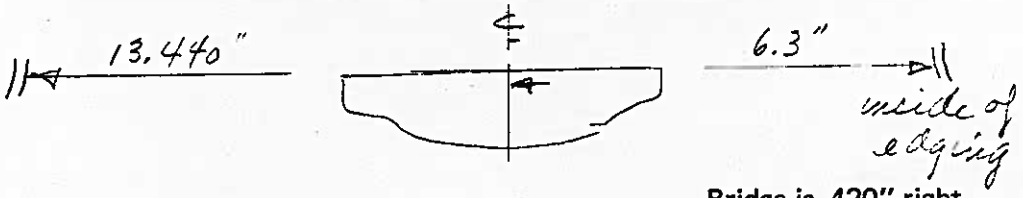
(-1 change) now has 5 fans to #2 pattern 1/4" x 3/8" high

– wood edging and extended fingerboard pattern shelf



full neck block

– accidental and unexplained twist of neck to effect very low bass strings.



Bridge is .420" right

– patch on back of bowl

11/21/74

#12-4

Lacks bass volume and presence compared to 3-3. However, middle triad is clear. Treble is with some tin pan on G and C,but not bad. Note that SN data varies greatly fore and aft. – Excerpt from 11/18/74 report. – CHK.

Original top K = .081, Veneer .025 thick

10-2-74

Final

CONTOUR Top #11 T 048 K .48 W. BR K .13

" 12 T 036 K .81 " .21 .160 - .169

HOLD UNTIL FNAL SOUND TEST of #12

& CHECK BEAMS.

10-28-74

#12 Thin plinky. Big high G very thin F & E

Has gutsy sound but no mids & thin high

Will reinforce side ring to try to help this

September 3, 1974

TO: Mr. C. H. Kaman

FROM: Materials & Process Engineering - A. L. Belbruno

SUBJECT: Graphite Top Deflections - Without and With Bridge Taped in Position.

Top No.	Description	Deflection Without Bridge	Deflection With Bridge
9	Contoured; 2 layers of .034 veneer @ $\pm 45^{o}$	.012	.005
10	Flat; 1 layer of .034 veneer @ 45^{o}	.046*	.025
11	Contoured; 1 layer of .034 veneer @ 45^{o}	.046*	.013
12	Contoured, 1 layer of .025 veneer @ 45^{o}	.081	.021

*Deflection for #10 was reported as .079" on 8/15/74.
Deflection for #11 was reported as .036" on 8/16/74.

A. L. Belbruno

ALB/tm

cc: C. McDonough

UNIT NAME GRAPHITE 12-3 THIN TOP

TEST RECORD № ~~53~~, G12-3

db

+20 +15 +10 + 5 0 - 5 -10 -15 -20 -25 -30 -35 -40

E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D

CLEFF HOLE

THIN TOP .035" VERY LARGE WOOD RIM, LARGE NECK

Hz 41.2 49.0 55.0 65.4 73.4 82.4 98.0 110.0 130.8 146.8 164.8 196.0 220.0 261.6 293.7 329.6 392.0 440.0 523.3 587.3 659.3 784.0 880.0 1046.5 1174.7 1318.5 1568.0 1760.0 2093.0 2349.3 2637.0 3136.0 3520.0 4186.0 4698.6 5274.0 6271.8 7040.0 8372.0 9397.2

OPERATING TECHNICAN /

DATE 11-27-74

OVATION INSTRUMENTS