CARBON 14-2

11/25/74-

Since the original #14 had such terrible sound with the holes at the main bout, it was decided to close those holes. Instead two round holes 2.6" in diameter each were placed at the upper most end. A heavy beam 3/4 x 3/4" was placed laterally adjacent to the holes resembling Carbon 3-3. The rim was reinforced with a layer of glass 1/2" in width for a total of three layers at the edge.

The K went from .089 to .058 in this new configuration.

The sound of this guitar is much improved. Volume is up. Base is up, etc. Above all the guitar has a brilliant treble. However, it also has a fault. The sustain is approximately 1/2 of that of Masters #1, and the bass is not as full as it should be which correlates for this low K. The next modification will be to reduce the beam and reduce the outer most fans which are quite posterior to the bridge.

14-1

	Right	Left	South	West
.2	.030	.032	.009	.009
.5	.076	.079	.024	.023
1.0	.152	.159	.051	.043

14-2

.2	.025	.024	.008	.007
.5	.061	.062	.022	.020
1.0	.121	.129	.045	.040

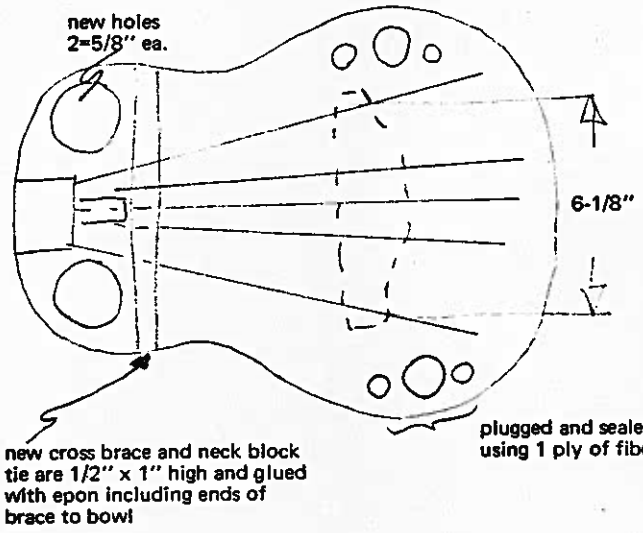
Top 14

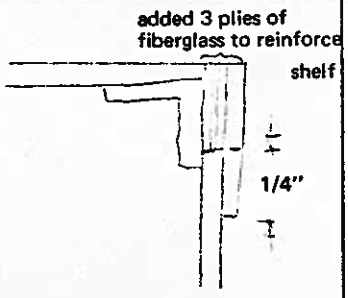
One ply. 0°. K - .079. Weighs 212 gr.

#14-5 Contoured carbon (1 @ 0°) round holes

	RL	SN	K	FF
12/02/74	.124/.129	.061/.080	.080	82~ 91~
11/29/74 #14-5 – trim center fan – no moment test			.069	
Outboard fans rebuilt to make #14-4	.117/.120	.048/.043	.057 tight	93~
11/26/74 CMcD – patch on				
#14-3 – 11/25/74 – made beam ¼" lower, cut off	.147	.042	.066	
beam section of outboard braces to make #14-3				
#14-2 tested 11/25/74 CMcD – patch on	.125	.043	.058 tight	
(a) changed 6 holes to 2 holes of 2-5/8" each				
(b) added ½" x 1" cross beam				
(c) added 3 plies of fiberglass to reinforce shelf				
changes (a), (b) and (c) result in change to #14-2				
1/32" bead of glass found in saddle slot equal fault in #14-1				
#14-1 tested 11/21/74 CMcD – patch on	.155	.047	.089 loose	

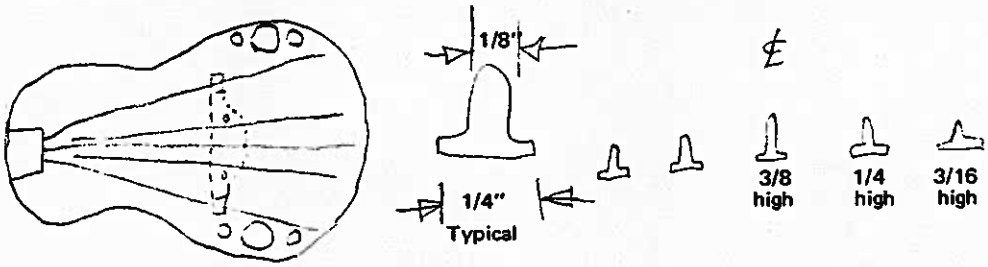
11/22/74 changed effecting #14-2





11/20/74
#14-1 – 6 holes

– as #14-0 it had 3 long fans 1/4 x 3/8" ..... .025 @ 10#
– knockout in bowl wiped out bridge and braces
– as #14-1 it will get 5 long braces, splayed further apart than pattern #2 and contoured by routing in the cross section. The heights will diminish towards the sides



– The ends will have about a 4½" taper
– replacement bridge has been contoured and bonded by Met Lab (resin looks heavy) – the bridge itself is a heavy (20 gram) Ovation bridge which was what Larry had on hand
– I told Ollie to leave the excess glue on the fans to assure a better bond
– shelf is cut down type with ears – has about .080" bond to bowl
Patch on back of bowl
has 6 hole pattern in lower bout (11.184")

11/21/74
#14-1 Carbon

Very thin, tin pan very bad on B string all the way. E and A bass string no wallop. Middle triad clear but low output. Completely unacceptable.

Shelf bowl overlap varies from 1/16" to .1 so we will try beefing up the corner since 3-3 has a very hefty corner.

11/18/74

"Conclusion from these look sees would lead us to going back to the narrow fan 1/8" wide and tapered so that there are approximately 3/8 in the vicinity of the bridge and forward tapering to a 1/4" at the neck block and tapering to nothing as customary at the bottom of the bowl. There should be five gans and the outer perimeter fans should be approximately 1/8" high. The in-between fans can be 1/4". A tabulation of the best available data is attached on these guitars showing relative values of K's as tested." Excerpt from 11/18/74 CHK report.

.034
#14 top only – original K = .79, weight 212 grams, 1 ply birch/veneer @ 0° N/S

UNIT NAME Carbon #14-5

TEST RECORD № ~~63~~ 14-5

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

91

184

82

GROUND DOWN RIM THIS REDUCED FUND FREQ COMPARED TO 14-4 BUT NOT ENOUGH BECAUSE OF LOW SUSTAIN & 0° ON PLY WILL NOT PERSUE THIS FURTHER

NOTE INCREASED VOLUME DB ON ALL PEAKS

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 JRK

DATE 12/4/74

OVATION INSTRUMENTS

UNIT NAME 14-5 Graphite SER. Nº ~~TEST RECORD Nº~~ #14-5 graphite

db

+20

15

+10

+ 5

0

- 5

-10

-15

-20

-25

-30

-35

-40

90.2

188.6

316.5

389.6

531.0

820.3

30 HZ 50 100 200 300 400 500 600 700 800 900 1K 1.5K 2K 3K 4K 5K 6K 7K 8K 9K

TECH

DATE 11/20/75

UNIT NAME GRAPHITE ± 14-~~13~~ 4

TEST RECORD № ~~54~~ G 14-4

db

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

E GA CDE GA CDE GA CDE GA CDE GA CDE GA CDE GA CDE GA CDE GA C D

CENTER PLY @ 0°

K = .057 TITE

TWIN HOLES 2.6" DIA TOP CROSS BEAM
FANS CUT DOWN & SCALLOPED BEFORE BEAM
BEEFED UP RIM

EARLIER VERSION HAD
HOLES @ MAIN BOUT ETC

GUITAR HAS ALWAYS LACKED SUSTAIN
BUT HAS CLARITY ON HIGH TRIADS

TWIN

Compared to 3-3 lacks power. Strong argument made in conference to get power output like 3-3. The very clear mid range being set aside for the powerful statement of the bass and clear treble of 3-3

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