Subject: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Wed, 05 Jun 2019 14:19:09 GMT
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Hi all,

Just signed up for the forum.
I realize that this forum is primarily Tuck 'n Roll (I used to have a Tuck 'n Roll head, last I heard it was in Vancouver) but my question today for those wiser than me regards a Kustom III Lead.
It is all original, and still working after a fashion.
All the electrolytic caps will be replaced which should help to preserve it's operating status for a good many more years.
The question I have regards one resistor on the PC 5065 rev 2 board.
The second from the right 1/4 watt brown bodied resistor that obviously was overheated.
Does anyone have the schematic / layout info on this board in this revision?
Can anyone tell me what the value of this resistor is supposed to be?

Best regards,

Lou

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Wed, 05 Jun 2019 16:28:21 GMT
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Welcome!
This site has schematics in our tech section .
You can search by amp model, or board number .
If you can not figure out the value of your resistor in question from the schematic then let me know and if you can take a shot of this area of your board and send it to my email I will sus it out for you!

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Wed, 05 Jun 2019 16:34:48 GMT
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I tried uploading pics but i don't seem to have that privilege.
I'd be happy to send you pics....

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by chicagobill on Thu, 06 Jun 2019 03:48:21 GMT

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I have a III-L head, but I don't know if it is the same version that you have. I will take a look and see what I can find out.

Edit: I just checked and I have a rev. 1 board. Tell me what resistor you are talking about and I'll see what I mine is. The second from the right, but what edge of the board?

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Thu, 06 Jun 2019 11:19:02 GMT
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I looked at the picture of the 5065 board you sent me and I need to pull one of my amps open to compare , but I do see that the resistor goes to the base of that to92 cased black transistor so I will try and figure it out from that in a bit if I can.

The other thing is that the resistor you question is a metal film type and they can look pretty darn bad yet still check out close the there original resistance and work!

You might want to ohm check it and report back , but the other need is to find out why it burned up in the first place, and all I can tell you for sure is that the black transistor to its left is not original and may not be right for the circuit!

Can you read a number off of that transistor?

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Fri, 07 Jun 2019 02:11:37 GMT
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I sent a few more pics to your email.
Without removing one side of the resistor I can't check the resistance and I'm a bit apprehensive about it fracturing.
The amp is still in operational condition.
With minimal signal, it's not even warm.
The transistor is in four places, not a lone replacement.

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Fri, 07 Jun 2019 13:06:03 GMT
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I will pull one if my power amps apart to check for you tonight.
We have only one quarter of the driver board layout on this site when we should have the whole thing, and unfortunately it's the wrong end of the board for me to see that resistor!

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Fri, 07 Jun 2019 13:50:58 GMT
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Thanks for doing that!
This is the first Kustom I have had since the late 90's.
This is in fact the first SolidState guitar oriented head since I had an Acoustic head back in the late 70's.
With the Acoustic I used a bogen tube mic mixer ahead of the input for a distortion more pleasing than the head's internal drive.
This thing is quite the powerhouse and so should be a lot of fun after replacement of all the aged electrolytic caps.
The quality of construction is amazing when compared to current consumer level gear.
I recently was asked to look at a co-worker's Fender Champion amplifier.
The pots were soldered directly onto the board!
When it had been tipped forward (like that's not gonna happen) the pot leads tore themselves off the circuit board traces.
After all the broken traces had been jumpered it worked fine again, but wouldn't you think someone in a focus group would have pointed it out?
This head on the other hand is typical of high quality robust service oriented design.
I'm really looking forward to the stares of disbelief when I haul this little surprise out for it's coming out party!

Best,

Lou

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Fri, 07 Jun 2019 16:32:49 GMT
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What you buy off of a store shelf these days gear wise is built to a price point for pure profit, when these Kustoms where made they where built to a quality level first which is the prime reason they are still around today and working!

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by chicagobill on Fri, 07 Jun 2019 19:36:50 GMT
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That is why that Fender amp is on the do not repair list. They are made so cheaply that it is cheaper to replace them than pay for someone to fix them.

The worse case on those amps is when the pots crack at the wafer and the leads stay soldered solidly to the board. Replacing all of those pots is really not worth the trouble.

Kustom amps were built to last and to be road worthy for the working musician. That's why they

used to come with a lifetime warranty.

And by the way, Kustom pots are also soldered directly to the pc board as well.

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Fri, 07 Jun 2019 20:26:39 GMT
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Sorry, I should'a been more clear with my dissing of the Fender design!
The soldering of the pots to the board wasn't really the issue.
If the pots were threaded body over the center shaft with nuts affixing them to the panel there might have been no problem (unless the center shaft sheared itself from the wafer). The real issue was that the pots were just the cheap threadless body in a clearance hole in the panel. If the design (and quality control in the assembly) was such that the pots were located adequately away from the front panel that the depth of hole in the knob would allow the knob back to panel to absorb the impact then the damage wouldn't have been as likely to occur. Oh well, you can put a kid in front of a CAD screen but you can't necessarily teach common sense.

(The clunk you just heard was me stepping down from my soapbox)

Lou

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by thetragichero on Sat, 08 Jun 2019 01:43:40 GMT
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buddy who works at a music store told me that even some of the blues deluxe, et al fender amps are requested to be destroyed instead of repaired
tried to convince him that one should be "destroyed" to my truck

been working on some of those old acoustic amps and just like the k200 they are much simpler and easier to work on than modern wave-soldered pcbs. some of these are beautiful in how they are laid out. unfortunately it's a lost art

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Subject: Re: Kustom III lead pc board 5065 rev2
Posted by chicagobill on Sat, 08 Jun 2019 03:16:01 GMT
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I work for a Fender dealer, the only amps that are not serviced are any amp not made in the U.S.A.

All of the Blues Series amps are still made in the US.

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by thetragichero on Sat, 08 Jun 2019 11:58:30 GMT
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you are correct. i believe i was thinking of the hot rod series but couldn't come up with the name carry on

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Sun, 09 Jun 2019 09:45:04 GMT
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A good friend of mine owns a local music school where he teaches guitar and drums and other folks teach other instruments and voice.
Quite a few times the keyboard teacher as plugged into one of the two little SS Fender 1-8" amps that he has for guitar use and blown them up and if it where not for my vacuum desoldering tool to get the 14 pin output IC pack out and replaced the only other way I would even waste time touching these amps would be if it needed a reverb pan, that's it!!

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Sun, 09 Jun 2019 13:21:40 GMT
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The 4 resistors you question are the 681 ohm 1% resistors and I think Kustom may have lost track of things because the schematic calls out all resistors to be 1/2 watters and these 4 are .250 watt resistors!

I would replace all 4 of these with 1/2 watt 1% metal film type resistors and then give the amp a good long test out up at atleast a 80 watt RMS output level to confirm they will not run hot again.

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Sun, 09 Jun 2019 16:30:23 GMT
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Thanks!
Will do tonight and report results.

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by podbaydoors on Sat, 15 Jun 2019 02:17:35 GMT
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Working great!

Replaced all electrolytic caps.
Using it into a 2x12 cab loaded with eminence redcoats.
The two inputs are significantly different in response.
The distortion afforded by the overdrive in channel a is really nice.
The white noise level it quite tolerable.
Most of my buddies are tube snobs, not me.
I just know what I like.
I need to make an A/B that grounds the unused side, that'll work well with this puppy.
Only gripe is with the small accutronics spring tank, could've been larger.
I had forgotten how much I like Kustom gear.
Now I have another collection about to happen!

Subject: Re: Kustom III lead pc board 5065 rev2
Posted by stevem on Sat, 15 Jun 2019 10:23:01 GMT
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Great new to hear!

Note that on these metal face amps the 2 input jacks for each channel are a different level of gain, not tone as on the non metal face Kustom amps.

Each jack has a built in shorting switch in it as many amps do and if they are clean will not add any hum , especially if the volume is down, reverb will always add some level of hum on most any amp that has the reverb pan mounted less than 8 to 10 inches away from the power transformer!