
Subject: Kustom 100 C-6

Posted by [Bodean1](#) on Sun, 05 Feb 2017 00:29:53 GMT

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I have pulled the chassis, and used a meter to test the transistors on the board on the right side. It appears one of the 2n3638 may be bad. The one closest to the jacks. Question is, is there another option for replacement besides finding an original. I have sourced some, but just wondering if there is another?

Is there something else I need to check while I have it on the bench?

Subject: Re: Kustom 100 C-6

Posted by [chicagobill](#) on Sun, 05 Feb 2017 02:15:07 GMT

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Welcome to the place.

Just about any PNP transistor will work as a replacement for that input transistor, even the lowly 2N3906. I use any number of transistors to replace those. If the transistor was part of the power amp or power supply, you might want to use a better part, but in the preamp Darlington pair, anything will do.

Subject: Re: Kustom 100 C-6

Posted by [Bodean1](#) on Sun, 05 Feb 2017 02:21:36 GMT

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Thanks for the response.

I have some 3904's, 5088's, and 5089's on hand. Will they do?

Also would that faulty part kill the whole signal to that side?

Subject: Re: Kustom 100 C-6

Posted by [chicagobill](#) on Sun, 05 Feb 2017 07:25:06 GMT

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No, all of the numbers that you have posted are NPN transistors. The 2N3638 is a PNP transistor, so a 2N3906 would work not a 3904.

The input of the preamp has two transistors connected as a Darlington pair one NPN and one PNP. if either one dies, the input signal will not get past the volume control.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Sun, 05 Feb 2017 13:19:56 GMT
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Thanks, I will look and see if I have any and give it a shot. I hope this is all that is wrong. That would be nice.

Subject: Re: Kustom 100 C-6
Posted by [stevem](#) on Mon, 06 Feb 2017 11:11:31 GMT
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95% of the time I use a 3906 to stick in there.
I have not looked in a while, but I think most of the Radio Shacks that are still open and carry parts still have the 3904 and 06 in there parts drawers.

While your in there I would replace that 33 uf electrolytic cap that is off of that Transistors Emitter lead, in fact I might strongly consider replacing all of the electrolytic type caps on that board. That replacement filter can be higher then 33 uf, like a 35 or a 50 is fine, or two 22uf caps in parallel, but the voltage rating of them needs to be atleast what it was on the one you pull out!

Higher voltage ratings on these type caps means longer life to them!

And the replacement caps do not need to be polarized like the stock ones, non polarized electrolytics are fine also!

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Mon, 06 Feb 2017 12:05:31 GMT
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Thanks Steve,
I have ordered some 3906's over the weekend. Radio Shacks are becoming obsolete around here, but I stumbled across some online after I had ordered. I will stick one in their to see if it fires up at least then may consider getting an original. At that time I will consider what you said about replacing the caps.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Mon, 06 Feb 2017 12:36:23 GMT
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Steve are you referring to the mustard colored RMC caps for replacement? The one on the transistor in question says .001 20% 25f.

Subject: Re: Kustom 100 C-6
Posted by [stevem](#) on Mon, 06 Feb 2017 14:34:01 GMT
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No, the .001uf cap is on the collector of the transistor.
Most times these electrolytic caps are black .

Subject: Re: Kustom 100 C-6
Posted by [chicagobill](#) on Mon, 06 Feb 2017 17:19:50 GMT
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Those caps are tantalums and I've seen black, orange and yellow ones in Kustom amps. They are polarized and marked with a plus sign or something to signify the polarity. They all are epoxy dipped, so they look like soft puffy blobs or kinda like colorful rasinets. Some of the common Kustom values are 1uF, 6.8uF, 10uF, 33uF, etc.

Please fix the problem with the dead channel first and then replace stuff that you want to upgrade. If what you do doesn't fix the problem and you've replaced a bunch of parts at the same time, you will have no way to know if the original problem is still there or if you have accidentally created a new problem.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Mon, 06 Feb 2017 20:30:56 GMT
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I don't guess there is a way to post pictures here? or is there?
Steve, I have posted a pic of the board on the thread I have on strat talk.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Mon, 06 Feb 2017 20:32:03 GMT
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chicagobill wrote on Mon, 06 February 2017 12:19Those caps are tantalums and I've seen black, orange and yellow ones in Kustom amps. They are polarized and marked with a plus sign or something to signify the polarity. They all are epoxy dipped, so they look like soft puffy blobs or kinda like colorful rasinets. Some of the common Kustom values are 1uF, 6.8uF, 10uF, 33uF, etc.

Please fix the problem with the dead channel first and then replace stuff that you want to upgrade. If what you do doesn't fix the problem and you've replaced a bunch of parts at the same time, you will have no way to know if the original problem is still there or if you have accidentally created a new problem.

Will do, I have the pnp's ordered. I hope they should be here by end of the week. Thanks

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Mon, 06 Feb 2017 20:47:00 GMT
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Maybe now I do see the "raisin looking" cap you guys are referring to. I was looking at the yellow one right beside the transistor, my bad. I am learning have patience with me. the cap has 107 15v m001 written on it.

Subject: Re: Kustom 100 C-6
Posted by [chicagobill](#) on Tue, 07 Feb 2017 01:25:34 GMT
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I looked at your photos, the caps are the black ones that look like chocolate covered raisins. The numbers 107 and 15v are the values, 107 which means 100uF and 15 volts. The value is in picofarads, 10 + 7 more zeros.

You can post photos here if you have a hosting site and have more than 10 posts on the forum.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Tue, 07 Feb 2017 01:34:49 GMT
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Thank you for the help, that makes sense. That will make it easier to find a part now if I need it. I got the new bulb and knob today. That was easy install, lol. Now I got the purple light lit up. Transistors are on the way. Maybe that will go easy to. A guy can dream.

Subject: Re: Kustom 100 C-6
Posted by [chicagobill](#) on Tue, 07 Feb 2017 04:51:50 GMT
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What bulb did you get to replace the pilot lamp? The correct number is #1829, 28 volts.

Subject: Re: Kustom 100 C-6
Posted by [stevem](#) on Tue, 07 Feb 2017 11:08:17 GMT
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The persons comment on the Strat site about a dry Solder joint on the 4.7 k resistor is just corrosion or flux remains that takes place on these boards at times, the trace side of the board is where the Solder connection needs to look good.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Tue, 07 Feb 2017 12:06:19 GMT
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chicagobill wrote on Mon, 06 February 2017 23:51 What bulb did you get to replace the pilot lamp? The correct number is #1829, 28 volts.
Fortunately that's what I got. I had the old bulb, so I used it to find a replacement.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Tue, 07 Feb 2017 12:10:34 GMT
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stevem wrote on Tue, 07 February 2017 06:08 The persons comment on the Strat site about a dry Solder joint on the 4.7 k resistor is just corrosion or flux remains that takes place on these boards at times, the trace side of the board is where the Solder connection needs to look good.
Thanks Steve. I was wondering about that too, whether that was normal. I noticed it on more than one. I was waiting till someone with more experience came along to look at it. I do have pics I took of the backside of the board.

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Fri, 10 Feb 2017 17:15:32 GMT
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Ok finished installing the replacement transistor. I am getting signal but it is not a full one. At volume wide open it sounds like it is on 2 compared to the other side. As I work the volume knob there is a bit of "pulsing" is the best I can describe it. as I can feel a sudden burst of air come through the ports where the speaker is moving back and forth. Not constant. Just does it once as you turn the knob up and down. With the treble knob turned wide open there is a lot of hiss that goes away if you have it turned down.
Left side is quiet as it can be for it's age, and still works well.

Subject: Re: Kustom 100 C-6
Posted by [chicagobill](#) on Sat, 11 Feb 2017 02:48:32 GMT
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The first question would be are you certain the new transistor is installed correctly?

Do you feel confident in working on the amp while it is plugged in and turned on? If you do, then the next step would be to start taking dc voltage readings and compare them with the values marked on the schematic.

If not, can you meter test the rest of the transistors on the board?

Subject: Re: Kustom 100 C-6
Posted by [Bodean1](#) on Sat, 11 Feb 2017 03:16:56 GMT
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I put the collector towards the .001 cap as steve mentioned in the post above. I do feel confident in doing readings if i can read the schematic correctly. I had done readings on all the transistors before replacing this one. this one seemed to be the only one reading bad.
