Collins KWS-1 High Voltage Connector replacement

Collins manufactured the KWS-1 transmitter from 1955 to 1958. During the production run approximately 1800 of these units were assembled and sold.

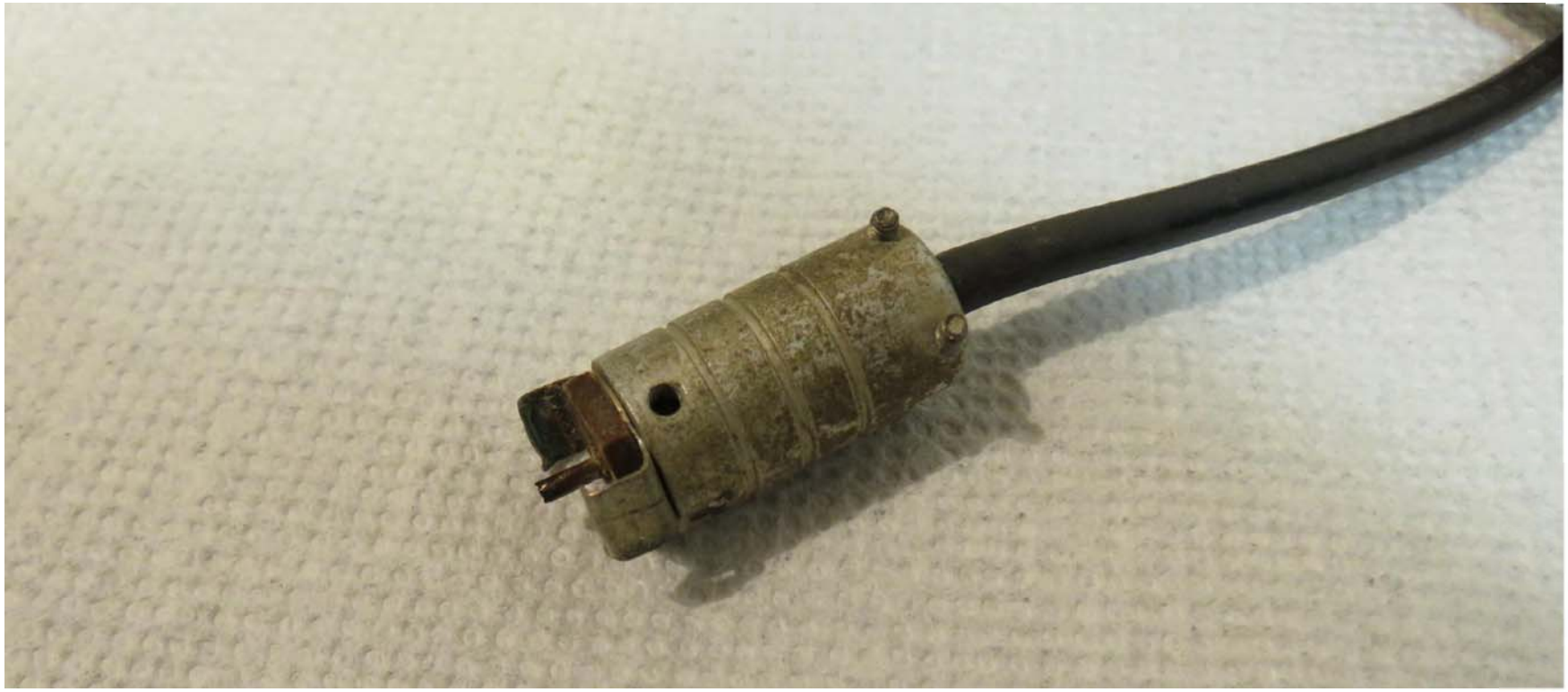
During the production run, two to four different connectors and sockets were used for bringing the 2100 VDC plate voltage from the power supply to the RF deck. One was a very low cost 90 degree rotated plug style. The second was a high quality Amphenol connector. The 90 degree plug that required a simple rotation to engage it, was at best somewhat dangerous and a less than perfect choice by Collins Engineering. The second type, the Amphenol was an excellent alternative. No information has been found on how many rigs used which type.

Of the six units I have immediate information on, 4 of the six have the low cost dangerous connector, while the other two use the Amphenol connector.

Pictures are shown on the following pages.

High Quality Amphenol Type HN Connector

Low Quality, Dangerous Connector Socket



High Voltage Cable Fitting

Close-up of the poor Cable Connector for High Voltage

There was a significant amount of discussion on the Collins Collectors Association discussion group, or Reflector, at the end of October 2016 and continuing into November. I was left with the distinct understanding that the largest part of the group felt that SHV connectors were a good alternative to use in place of the original low quality connectors used on the majority of the KWS-1 transmitters.

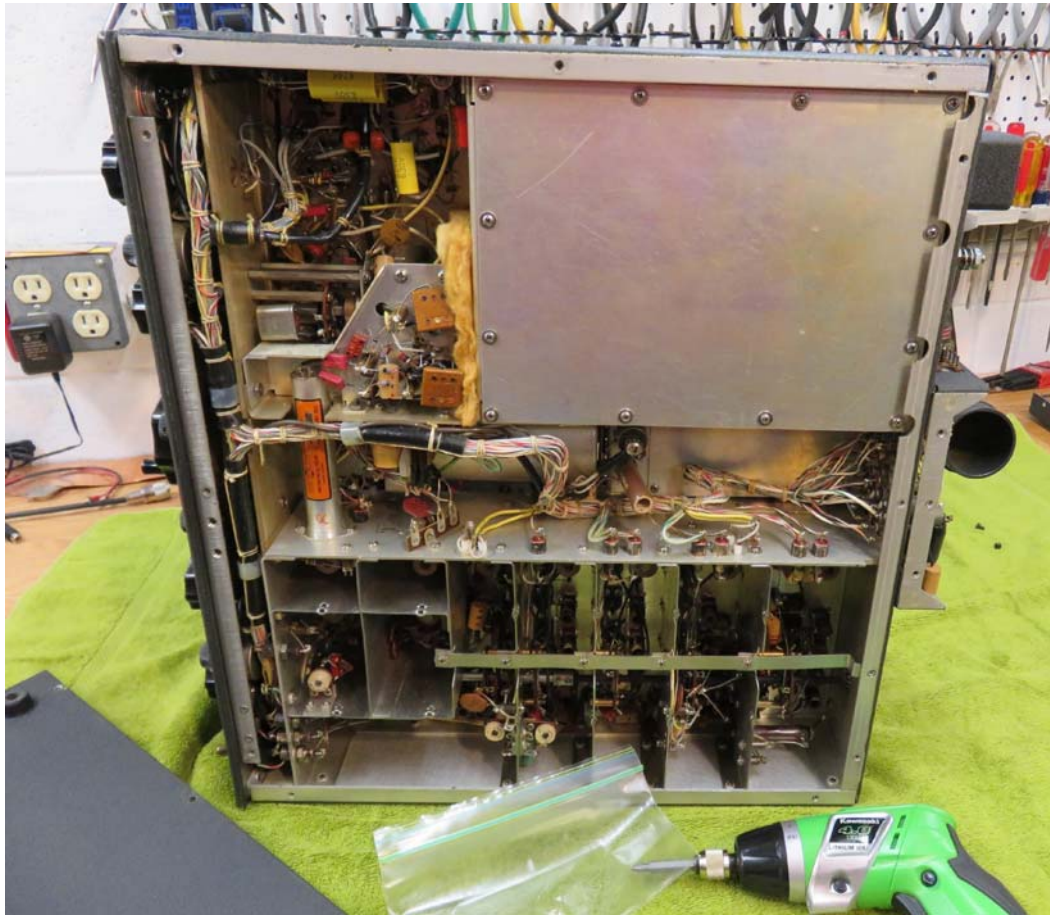
I placed an order for the SHV connectors and several other component parts I knew I would need for the upcoming improvements.


PASTERNACK
Pasternack Enterprises, Inc.
P.O. Box 16759
Irvine, CA 92623-6759
Please Recycle
CEDARBURG WI 53012-916
WI 532 9-02
KINGS
CABLING PROCEDURE CP-1000
MASTER
Petsafe

So now I faced dis-assembling the RF deck and installing the chassis mount connector, a .01 mfd at 6000 VDC RF By-pass capacitor and using a ceramic insulator to hold everything in position. I will show sequential pictures taken during dis-assembly and re-assembly of the RF Deck.

First the top cover and top back sheet metal was removed.

Next the bottom cover is removed. It is held on by a total of 24 screws!

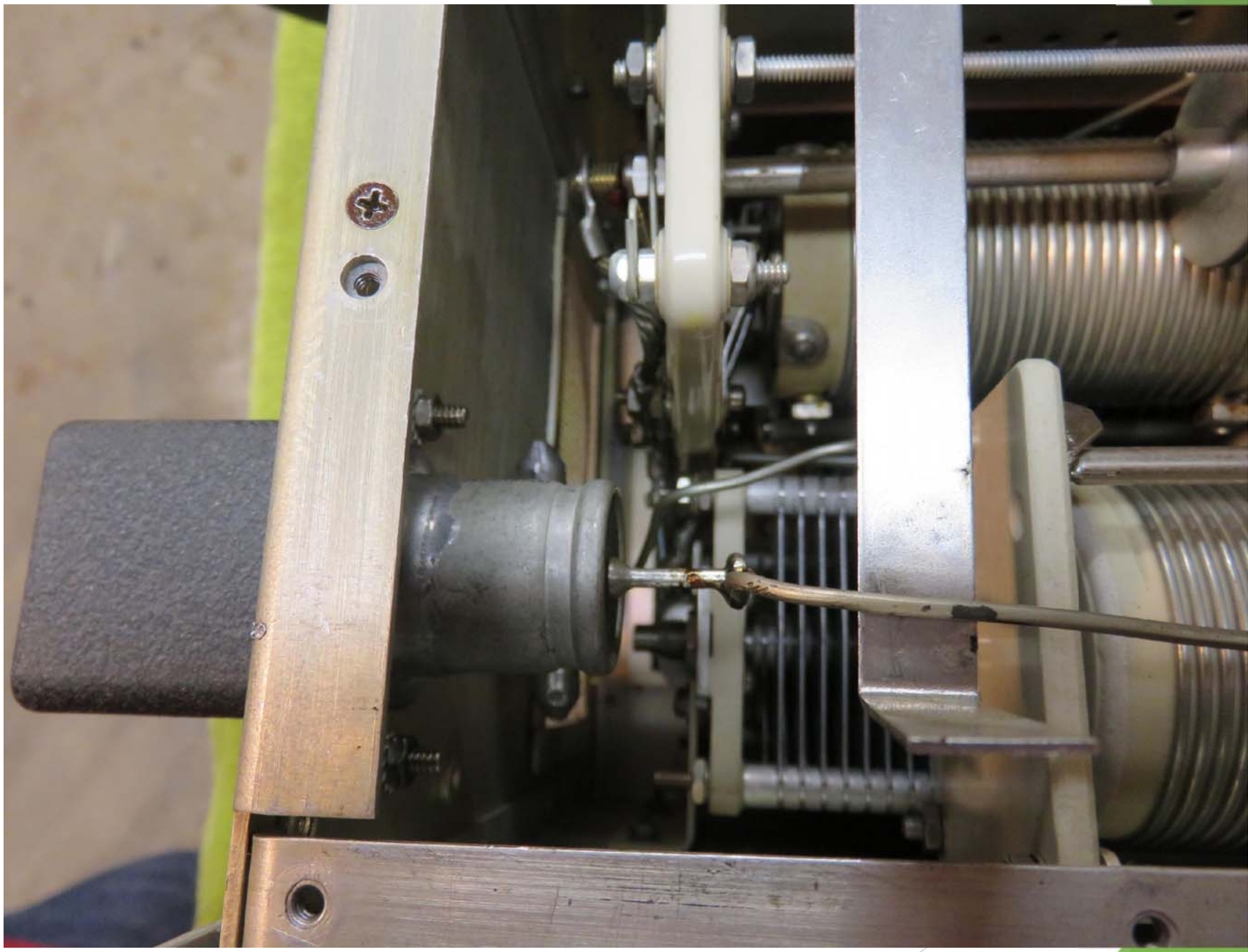


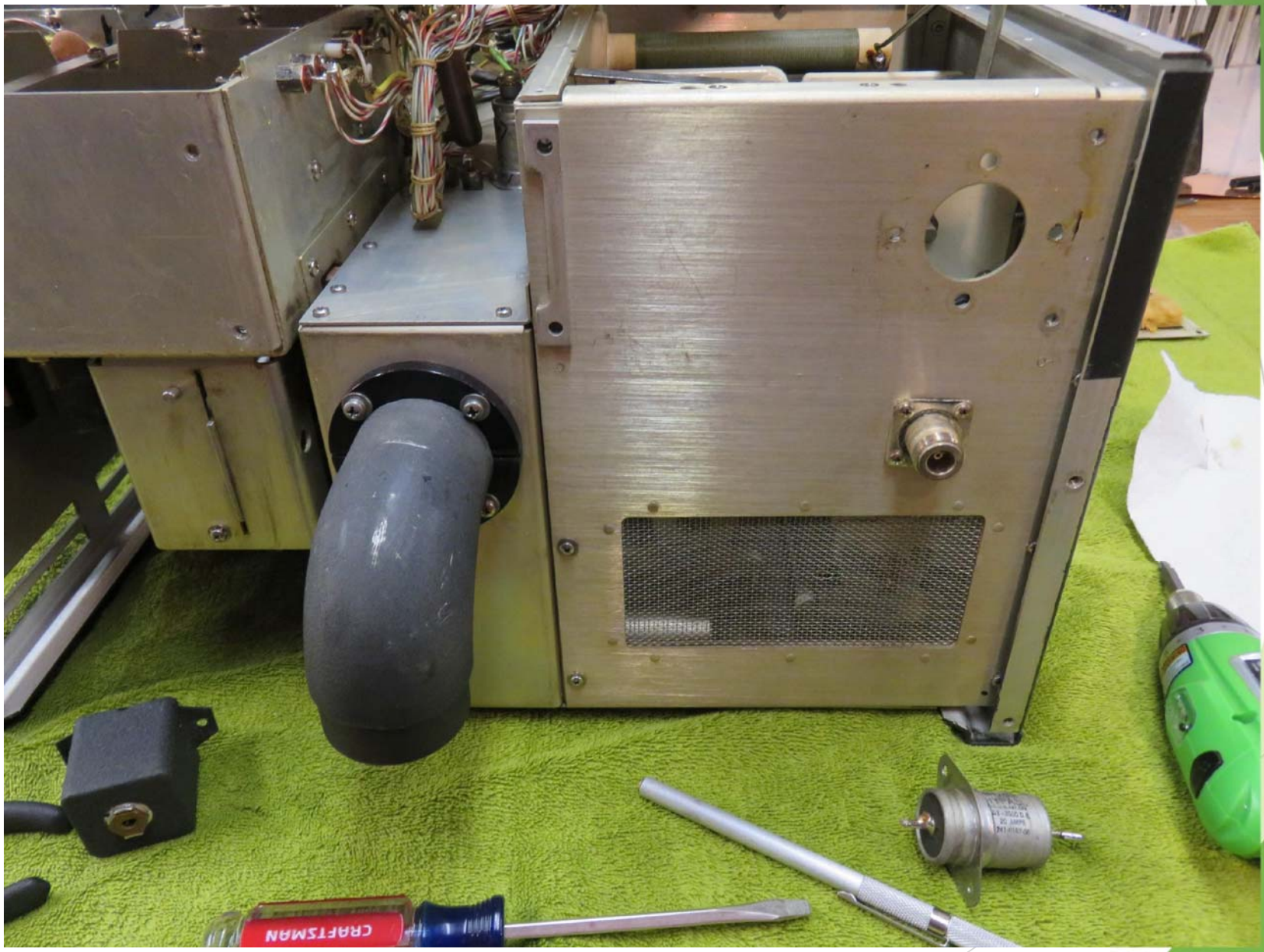
With the bottom cover removed, we have another cover to deal with.

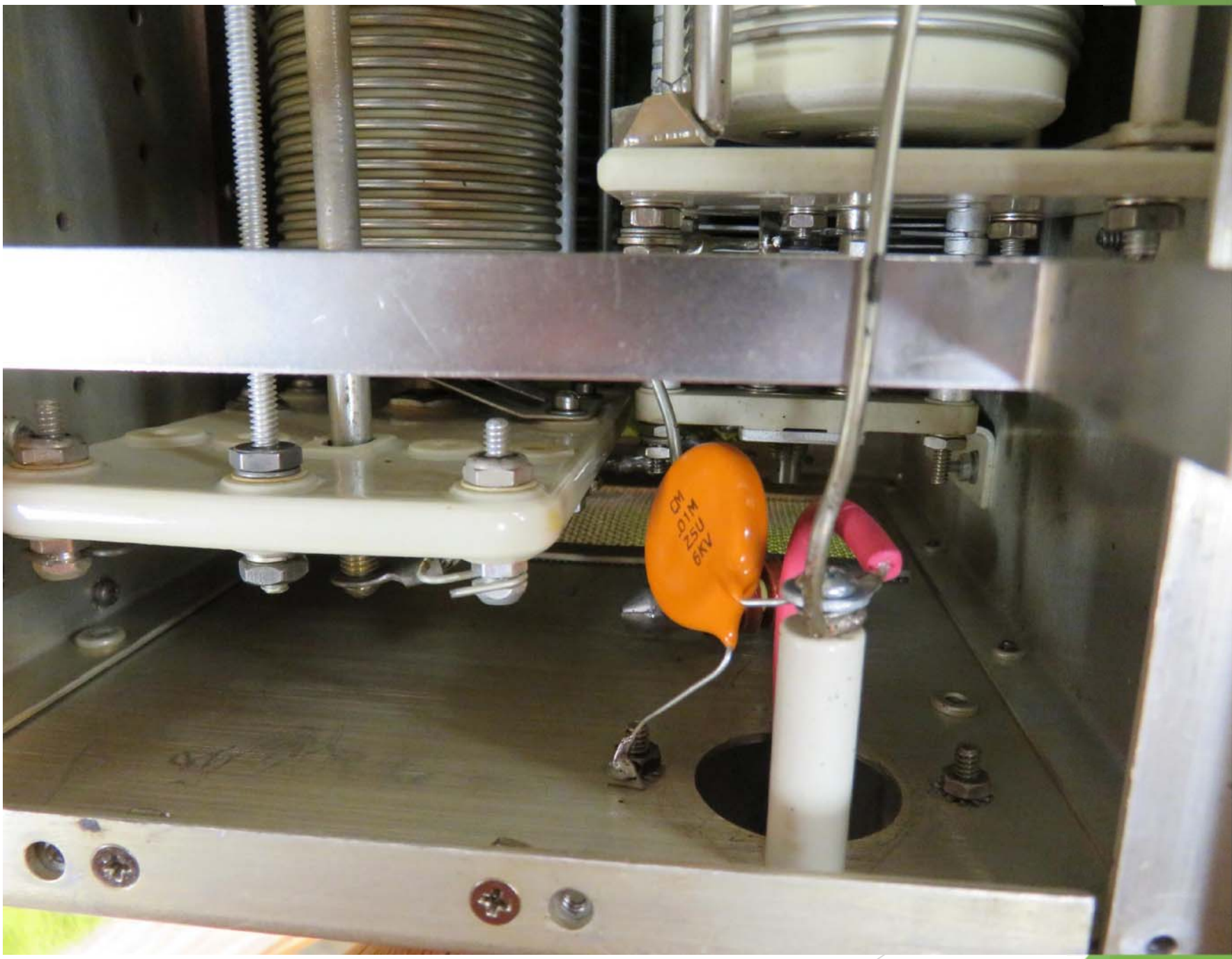
I make use of zip-lock bags with labels to keep things organized

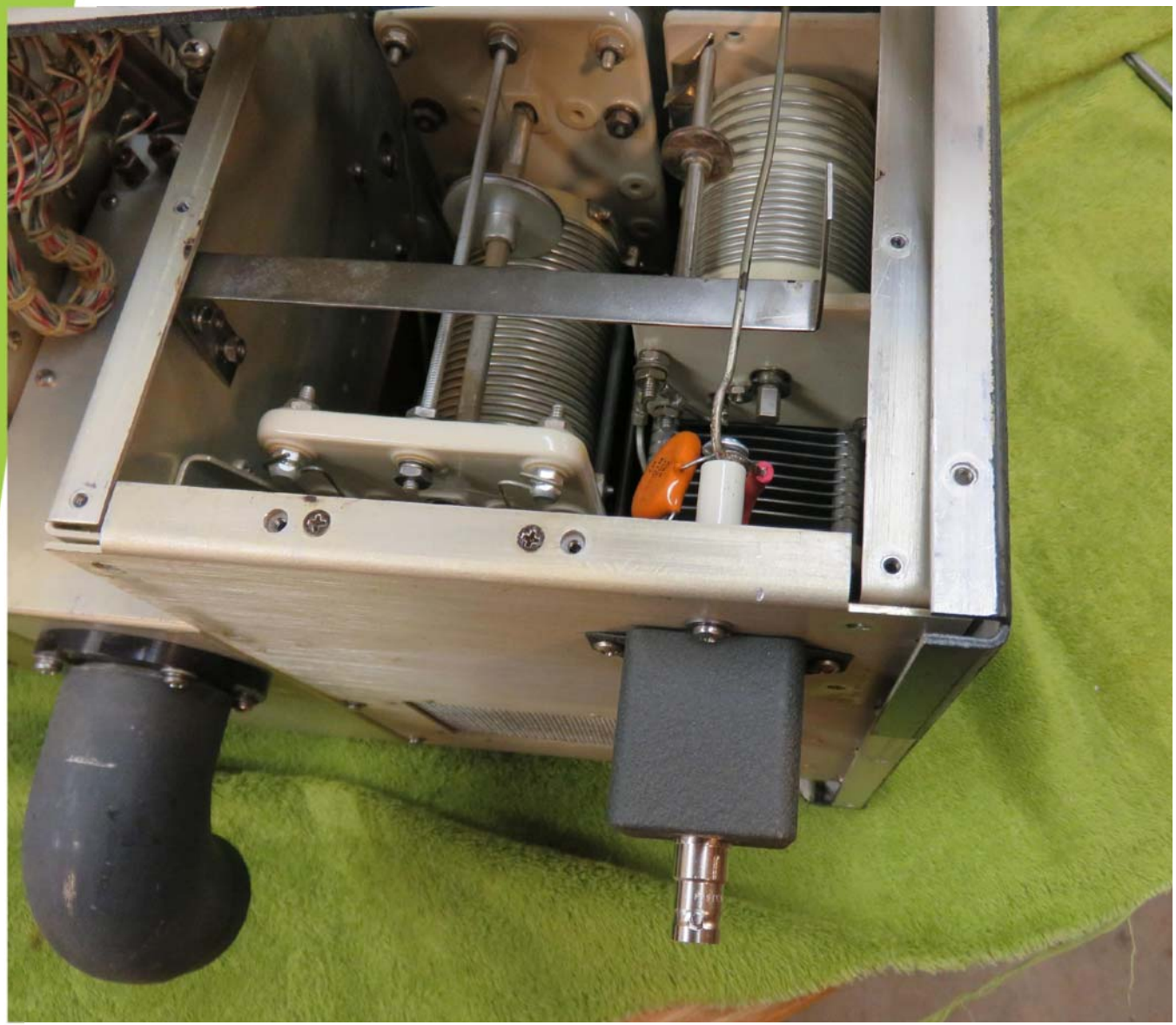
Next the lower back panel has to come off. This piece has several spacers, so be ready to figure out where they came from!

Now we have reached the point where we can actually start with the installation of the chassis mounted SHV connector.




CRAFTSMAN


CM
.01M
25U
6KV



A better view of both the interior work and the SHV connector.

Hey this program is done!

Must be getting close to Pizza Time!


COLLINS
KWS-1
COLLINS
75A-4 RECEIVER