

R-390 Repair Depots, 3/6/2022

I have read a lot about Repair Depots while reading the R-390 related doc and thought a separate file would be worth while. The following are some of the posts I've read.

Please let me know any suggestions for content and contributions welcome, Larry Haney, Larry41gm 'at' gmail 'dot' com. Thanks.

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Date: Thu, 23 May 2002 15:42:32 -0400  
From: Norman Ryan  
Subject: [R-390] Front Tags Revisited

If a receiver went to the depot for refurbishing, restoration, repair, or what have you, it was taken apart module by module. The front tag also was removed if the front panel was to come off for repainting.

At the end of the process, the panels and modules went back together, then a tag was fished out of the bin and re-attached. The only thing the assembler watched out for was to put an "A" tag on the "A" receiver and a non-A tag on the non-A receiver. That's why so many receivers have tags that don't match up with the differing makes of modules inside.

Modules also got mixed in the field as well as at the depot. The depot merely was interested in getting the receivers up to spec and back in circulation. Once back in the field, the front tags were useful for helping keep maintenance records straight. If you encounter a receiver with modules of the same make, contract, and similar range of serial numbers, chances are it's a "low mileage" unit that saw little service and lots of shelf time.

Bottom line: Do not rely on the front tag to tell what's actually inside, especially when shopping for a rig. Check out the modules and form your hunch from there.

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From: "Chuck Rippel"  
Date: Wed, 19 Jun 2002 12:57:20 -0400  
Subject: [R-390] Oooops...

The nametag problem is fairly common. Tags were swapped for inventory control or at depot. Hank Arney did make repro tags that were supposed to be of good quality. Maybe he will contact you if more are available. I guess you could check the back of the chassis and see what manufacturer and contract number you find. You can check the AF deck and power supply easily for manufacturers. That will give you some idea of what components are there for starters. It was common to throw in whatever component was on the shelve at depot, so don't be

surprised to find a mix of manufacturers.

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Date: Sat, 24 Aug 2002 06:33:38 -0700 (PDT)  
From: "Tom M."  
Subject: [R-390] Not so lucky, re: matching modules and s.n.'s

Of all the 390A's I've had, at least half had modules from the same contract. This included Collins, Mot's EAC's, SW's etc. I had a 725 that was scrambled and a few others, but to imply that all radios are depot dogs is incorrect. The 67 EAC's seem to have been least likely to hit a depot as the majority of those that I've seen were all EAC. With EAC making so many, they could have gone to the depot and come out all EAC again. My old Collins has all Collins modules. The RF and IF have no sn at all but have Collins p.n. s. You can see a pic at

**INVALID URL** <http://www.geocities.com/courir26/390Asn7.jpg>

The only contract that I know for sure the had matching s.n.s is the Fowler contract. I know a chap who owned two of the five and this was the case with both. But you picture the EAC assembly area working two shifts, making 15,000 390A's, Bob Edwards cracking the whip, who the heck would care about matching numbers when modules are coming down the line like cakes on I Love Lucy. At Fowler on the other hand, where they made five total radios, a batch of two and then a batch of three, they probably had no choice but to match them up as they were completed.

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From: Randy <R390rcvr 'at' aol.com>  
Date: Fri, 9 Jan 2004 15:27:30 EST  
Subject: [R-390] R-390A dating

The 1st thing to check in your case is the number of fuses on the back panel. 1 or 3? The 54 contract, one fuse. The 56 contract had one fuse until # 2683, then 3. All the 58 contract had 3. You can sometimes get dates off installed components, such as the line filters, etc. Obviously, may have been changed, but not often. The filter caps often are changed and are dated but less reliable. Lots of other tips if you are interested in further refinement of your dating. As many others will tell you, often they have been through the depot refurb process, where everything is shuffled around, and you end up with a mongrel, aka depot dog. Still good radios, but more mutt like. Hard to tell who the parents were!

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Date: Mon, 25 Jul 2005 12:38:56 -0400  
From: Barry (BarryG 'at' visi.net)  
Subject: [R-390] Depot Dawgs

I have been on this list for years, I enjoy the 390A and 390 tech talk. This is my first post, I hate the off topic stuff, but having

put up with it this long, maybe you can indulge me. This has been discussed in the past, however, not recently. I worked in a Depot for 5 years, Naval Air Rework Facility (NAS Norfolk). EVERY ITEM WE OVERHAULED HAD TO PASS THE FACTORY SPEC. PERIOD. Were there different manufacturer's for the same item?

Yes. Did various modules from various manufacturer's end up in a different mainframe? Yes. Did the build quality differ from vendor to vendor? Yes. Zero defects were the stated goal at my facility, EVERY piece of gear I personally overhauled had a document with MY artisan stamp (number unique to the tech) on it.

Plus, there was a SEPARATE Quality Assurance Dept. that sampled 50 to 100 percent of the output of equipment from the shop. God forbid you got a QDR (Quality Deficiency Report) back from the customer on a piece of gear you certified as spec. It created a real problem for the shop and tech.

I suspect and have seen, this "DEPOT DAWG" moniker used by various folks over the years. Who might not have a TRUE appreciation for the depot overhaul process as I saw it. Of course there could be one bad apple in every barrel, however, in this case THAT apple didn't spoil the bunch.

To reiterate: EVERY ITEM WE OVERHAULED HAD TO PASS THE FACTORY SPEC. PERIOD!

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Date: Thu, 1 Dec 2005 18:21:16 EST  
From: Flowertime01 'at' wmconnect.com  
Subject: Re: [R-390] Incomplete IF module (matched numbers)

>Begs another question, were all of the module serial numbers in a >given radio identical? ... Tom, N3LLL

No way. Some days someone tried to get a few of the modules of the same number into a chassis and then the final inspector would pass a bunch of receivers. The last act was to put the tag on the front panel and make it government property. Some times someone would try to match the tags to the internal modules. Field stations had hundreds of receivers. At the initial "building of the station" several hundred receivers from likely the same contract would arrive all at once. This provided a lot of receivers with consecutive numbers. Over the years, the technicians had time to play games and match up modules and numbers. Some technicians thought the receivers once were all together as matched sets and the miss matched modules had been swapped out and needed to be put back. On some small contracts, things fell into line fairly well. There is this holy grail of a receiver with all matching modules inside. It did happen. But more from bored assembly crews than a matter of assembly

requirements. Some times technicians in the field would swap a few modules around to get the last one back in place. Some front panel tags also got swapped to make a matching set. But this was from technicians have some free time on their hands.

Roger KC6TRU

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Date: Mon, 17 Oct 2016 10:11:23 +0000  
From: Les Locklear  
Subject: Re: [R-390] Tobyhanna

Tobyhanna was a repair depot. When receivers and or the modules could not be repaired at the field level they were shipped to Tobyhanna and other depots for repair. The R-390's would be disassembled down to modules, cleaned tested and repaired, re-assembled (not always with the same modules in the same receivers) and thus were nicknamed "Depot Dawgs." Collins had nothing to do with it.

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Date: Mon, 17 Oct 2016 11:47:53 -0400  
From: Bill Cotter  
Subject: [R-390] Depot Dawgs

Lexington-Bluegrass Army Depot (LBAD) in Avon KY is a depot like Tobyhanna where communications and avionic equipment were overhauled and shipped worldwide. I was a young civilian engineering tech while in college from 1972-75, and I spent a lot of time repairing R390's, R-390A's, and R392's, as well as a lot of other mil gear. We employed around 5,000 people, most of whom were electronic and mechanical technicians, machinists, welders and other crafts-people.

The R-390x would come in on one end of Warehouse #3, be stripped down to their component parts, everything cleaned in some kind of vapor-bath, dried, and each assembly sent to a station for testing and repair. Panels and knobs were stripped, painted and lettered by rows of people. My role was fabricating the workstation, testing jigs and test equipment for each process step per mil specs.

After each module was tested, repaired, final tested and passed QA, the component was placed on a shelf by its designation. A radio was assembled from the component parts off the shelf, then subjected to a burn-in and a final QA with an operational test. The "Depot Dawg" came out the other end of Warehouse #3 like-new with a serial tag ID'ing LBAD as the overhaul depot. Nobody had any concern for "pedigree" as all the components were made to the same mil spec. The radios were packaged in containers to withstand drop-shipping from helicopters and aircraft in any weather, and the pallets containing the radios were shipped out on train cars.

Where the Collins name may have come about in Tobyhanna was that we

also repaired several hundreds of KWM-2A's and 30L-1's. Mostly from Vietnam MARS stations. They usually had a characteristic red dust and some were shot up. We would make these radios like-new, but without the extensive dismantling that the R-390x series underwent. As a consequence, a number of radios deemed unrepairable went to the scrap heap (off limits to hams). One of my many jobs on the Collins line was to operationally test the pairs in a commo hut on the site by making QSO's in the ham bands. Without a doubt, it was a dream job!

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Date: Mon, 17 Oct 2016 20:47:28 -0400  
From: Bill Cotter  
Subject: [R-390] Tobyhanna

There were three main signal depots in the 70's that did 3rd echelon level repair and refurbishment services, since WWII. All three were in competition with each other, bidding for each contract service. They were Tobyhanna Army Depot, Lexington-Bluegrass Army Depot, and Sacramento Army Depot. Ultimately, Tobyhanna was the sole survivor.

<http://www.globalsecurity.org/military/facility/tobyhanna.htm>  
<http://www.globalsecurity.org/military/facility/lexington.htm>  
<http://www.globalsecurity.org/military/facility/sacramento.htm>

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Date: Mon, 17 Oct 2016 20:58:04 -0400  
From: Bill Cotter  
Subject: [R-390] Depot Dawgs (dogs)

The Bluegrass Army Depot (Richmond, KY) has a vast amount of acreage where our nations chemical weapons are stockpiled and destroyed, and the deer are plentiful at the heavily guarded facility. Once a year a purge of deer is ordered, and the hunters flock to the site.

Lexington Army Depot (Avon, KY) is downwind about 26mi, and is the former site of depot repair services. It is now extinct, and has Raytheon doing contract work for the special forces.

The original "dogs" term came when a huge order of R-390x receivers were requested. During re-assembly of the '390, all the good modules were used up in the first few waves of production. Then all the modules set aside because of complex problems (dogs) had to be worked to meet the final total shipping quota. there were a lot of hair pulling on many of these "dogs" trying to get them to meet mil specs. The final receivers met all specs, and had the blood, sweat and tears to go with them.

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Date: Tue, 18 Oct 2016 02:05:31 -0400  
From: Charles Steinmetz  
Subject: Re: [R-390] Depot Dogs

> Then all the modules set aside because.....

I suspect that isn't strictly true. I've worked on quite a few LAD depot dogs, and many of them had intractable problems that I believe were present both when the affected modules arrived at LAD and when they left in assembled radios. Things like wires crushed under chassis hardware, electrolytic capacitors installed backwards, connectors with missing pins that had obviously never been opened after original assembly, RF/IF transformers with shorted turns due to obvious manufacturing defects, components with mismarked values, etc., etc., all of which were clearly present when the modules were originally manufactured and had not been re-worked subsequently.

I believe that by the end, LAD was not checking the outgoing dogs particularly carefully and that quite a few did not work properly. Many still don't.

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