

LONGEVITY OF PNEUMATIC VERSUS SOLENOID PLAYERS

..... By Craig Brougher

The subject of longevity of pneumatic player pianos versus solenoid players has attracted a few comments. Each side seems to have made their points. I think the answer is a relatively quick one, and I'd like to state it for the record.

If a solenoid player isn't played hard, and the volume is left turned down to a low level as recommended, it should last a comparatively long time. When played like that, it becomes a live source of background music for hotels and commercial establishments. That is really what this instrument was designed for to begin with-- soft, easy listening, and no hard classical music performances. The most vulnerable component of this system in the first 15 years of its serviceable life is the disk or tape player. With steady playing in a commercial environment, operated by the establishment itself and not the customers, I understand that they last on average, 5-7 years.

The pneumatic player, when rebuilt the usual way, with modern rubber goods on the pneumatic strikers are good for about 50,000 tunes (called "plays"), if the cloth goods are the same quality as the original commercial machines used. Sometime after that (when rebuilt the usual way), the air motor will need recovering, then the pneumatic strikers and pump will have to be recovered. 10 rolls/day played on it at full power, 7 days per week, year-round, it would last about 14 years using modern rubber-covered cotton goods. The same wear and tear on a Disklavier playing softly as they do might mean it was ready for its 2nd or 3rd tape or disk player. But its wear and tear is much different than pneumatics, and under commercial conditions, final.

If you set that same pneumatic player to play as softly as the Disklavier plays normally whenever you hear them, it should last for at least 75,000 plays between rebuilds. That would be 20 years in a commercial environment. However, the solenoid stack after that number of plays would be wearing out. The teflon coating, the plastic threading and stops, the striker cushions, and everything that causes them not to get stuck and burn out is reaching the end of its life. It's time for a new stack because they are economically un-repairable. The top voltage available for these solenoids would burn them out in 5 seconds when left on continuously, but the heat accumulated over time deteriorates the plastics and coatings on which they rely.

I go for a 50 year life in my restored pneumatic instruments however. It isn't necessary to recover the pneumatics every 20-30 years, even if they are played hard. It isn't necessary to worry about the leather or pouches in the valves because that doesn't wear out. And the pumps outlast the originals because of certain precautions which I take, and materials which I use.

Obviously all rebuilds aren't the same. The rebuilt pneumatic player that lasts only 14 years and needs another rebuild seems fairly common today, when reading comments in the MMD, but it

shouldn't be. I have re-restored many so-called "restored" players which were rebuilt only 15-20 years ago. The materials they used were all cheap grade, even though the workmanship of some was acceptable. In every case however, these instruments still had their original pouches and inside valve leathers, and original gaskets were here and there, mixed with new ones. I think what most call "a full restoration," I would call "selective repairs." Top quality materials all eventually time out but I have yet to see it wear out. For instance, the pneumatic cloth I use cannot be even worn a little bit in 200,000 plays.

You don't always get what you pay for, but you'll always get what your rebuilder is going for. If he's shooting for 50 years, he'll eventually make it, and if he's thinking in terms of 15 years with some maintenance he can count on in that time, then that's what you are going to get. You can pay just as much or more for that kind of "restoration" as you can for a thorough job with the longest lived materials that were ever made.

Now I am not suggesting that within that time, the pneumatic player will need no repairs. I am suggesting that repairs needed will usually be localized, classified as normal "new player" maintenance. Admittedly there is no way to know for sure how long some necessary substitute product will last. Anyone can be fooled. But care and conscientiousness toward longevity go a long way to assure the very best, most durable restoration possible. It makes a big difference when you think in terms of two generations rather than a decade and a half.

When it comes to operating a Reproducing Player Piano to its full capacity as a classic performing instrument, there is no way that commercial solenoid operated players can compete with pneumatics. While the pneumatic player with modern rubber covered cotton goods on its striking pneumatics may be wearing in 15 years when played hard, the solenoid player, if played to the same levels of power and volume, would not be expected to last even half that long. So in a way, it's like comparing apples and oranges when we get into the details of a realistic, fully dynamic performance. Pneumatic players will impress classical music critics. Commercial solenoid players are not designed for that. Pneumatic pianos have graced hundreds of concert halls across the country, amazing audiences and top music critics with their total realism. Solenoid players have yet to make their debut on the concert stage.

The true test of pneumatic player piano restoration is coming. Electronic media may soon be able to install right into your pneumatic player, replacing player piano rolls when these pianos are to be used in a continual hands-off performance mode. Stay tuned. While your electric-driven pneumatic player will still be capable of playing good-old piano rolls, it will have another mode of operation, that being through a computer, allowing you to choose songs or assemble your own programs from lists of hundreds or thousands of tunes. It is the ideal marriage. **Power Plus Convenience.** As they say, "You haven't seen anything, yet." But then, you are going to need a really long-lived restoration sooner or later, and I've been doing those since 1967.

