

# *Getzen Trumpets*

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## Happy Anniversary Getzen

by Milo Greene



1991: Bob Getzen (right) and his son Tom (center) celebrate the purchase with Tom's sons Brett (left) and Adam (center).

March of 2006 marks a great achievement for the Getzen family. That month they will be celebrating the 15th anniversary of the family buying back the company bearing its name.

In 1991 the Getzen Company's production and financial troubles finally came to a head as the company filed for bankruptcy. Finally, after 31 years, there was an opportunity for the Getzen family to once again own the company. After a few months of negotiation Allied Music Corporation, owned and operated by the grandsons of Getzen's founder, purchased the Getzen Company's name and assets. "It was a lot of work and a long hard process," recalls Tom Getzen. "At times, it seemed like the purchase would never get done. When it was finally over though, it was one of the proudest moments of my life."

Immediately after the purchase, things began to change. First, the majority of Getzen's employees and equipment were moved from the facility on Centralia Street to Allied Music's building on the other side of town. This doubled the size of Allied Music. In order to accommodate the sudden increase, an 18,000 square foot addition was built. The addition included a new bell department, buffing room, water treatment center, dent department, and several offices. As the Getzen employees moved into their new home the skilled Allied Music staff met them with

open arms. They were also met with new and repaired equipment along with improved working conditions. It didn't take long before they realized the general philosophy of the company had changed as well. "One of the first things we did was let the employees know that things were going to change," says Tom. "We wanted to turn things around to make the company a leader again and we needed their help to do it. We couldn't stress that enough."

Re-establishing the company's place in the industry was difficult. "For years, the overall quality of Getzen products had slipped," Tom notes. "Our first priority and biggest obstacle was to change public perception about the Getzen name." The new Getzen Company wasted no time as the entire product line was reevaluated. Models were closely examined with some being eliminated all together. Design tweaks and corrections were performed to improve the remaining instruments. New models were also added to incorporate instrument designs previously used by Allied Music. At the same time, every aspect of production was evaluated to improve not only labor time, but also finished instrument quality. As Tom says, "It wasn't a smooth process by any means, but it had to be done."

The drive to push the Getzen Company back to the top continues today. In the last fifteen years, the company has designed and offered several different generations of professional instruments. Although some didn't make it to production or last long as models, they all taught their own valuable lessons. Lessons that allowed the company to make improvements across the board and brought the product line to where it is today. "Since buying the company back we have gone through a lot of R&D looking for the 'right' designs. Especially with our professional trumpets," says Tom. "It took us awhile, but the pro horns we're putting out now are better than anything the company has built in the past. Now when players think of Getzen, quality and craftsmanship are the first things that come to mind and we are once again an industry leader."

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"The last fifteen years definitely did bring along a lot changes," remarks Tom. "Hopefully, the next fifteen will be even better for the family, the company, and our customers."

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## From the Mailbag...



Will Parker (fourth from left) pictured with a United States Marines funeral detail. Will is a member of Bugles Across America and has been performing Taps for over three years. This was the first of many to come using his new M2003S American Heritage Field Trumpet. Thank you for all you do Will.

Dear Getzen,

Here are pictures of my son, Will Parker, playing his American Heritage Field Trumpet for the first time at a funeral.

Will has been playing Taps since 7th grade for local funerals. He is now a 10th grader. The field trumpet was my gift to him this past Christmas. Up until then, he had been playing a Bach trumpet. The field trumpet sounds awesome.

Thanks for offering such a fine instrument to the Bugles Across America bunch. It will always be special to him.

Sincerely,

Gina Parker  
(Will's Mom)

To contribute to the Mailbox, send letters and photos to [mailbag@getzen.com](mailto:mailbag@getzen.com)

# News From the Road



*Mike Vax* gave his 3001MV in gold plate a run while sitting in with Octobop at Boa's Club Elite in Cuperino, CA. From left to right: Geoff Roach (director of the San Jose Jazz Festival), Mike Vax, and Carl Saunders.



## Featured Custom Series Dealer

*The Horn Shop* of Fresno, CA is this issue's featured Custom Series dealer. They carry the full line of Getzen brass including a variety of Custom Series trumpets and trombones. They also feature a full service and skilled repair department.

For more information on *The Horn Shop* call 559-276-2247 or visit them on the web at [www.thehornshop.com](http://www.thehornshop.com).



*Jic Music* of Holland proudly showed off their new Getzen display during the North Sea Jazz Festival this past July. According to Jic, the 3047AF and 3003 Genesis were the hits of the show.

*Tom Getzen* (far right) welcomed the *Göteborg Brass Band* to Elkhorn in October. The band members toured the factory and spent time play testing Getzen and Edwards instruments. The band and its members purchased 3850 Bb and 3892 Eb cornets, and 3895 flugelhorn to add to their impressive inventory of Getzen small brass.

For more info on the band visit [www.goteborgbrassband.org.se](http://www.goteborgbrassband.org.se)

*Mike Vax* (left) and *Tom Getzen* (Center) listen on while Getzen artist *Johnny Brit* test drives the new 3001MV trumpet during the 2006 NAMM show in Anaheim, CA.





*At first glance, the 390 pistons appear to show almost no wear at all. It wasn't until the pistons were measured that the minimal amount of wear was shown. At this point, the 390 pistons had been run for just over 1,000,000 strokes on one oiling and still performed almost like new.*

The second thing to note is where the wearing took place. With Trumpet X the vast majority of wear was seen on the pistons themselves. Each piston lost .002" - .0025" from their diameter, but Trumpet X only lost .001" from the valve casing. The majority of wear on the 390 occurred on the casings themselves while the pistons stayed relatively intact due to the hardness of nickel plating compared to yellow brass. With a bearing, it's ideal to have one surface be much harder than the other. This leads to consistent wear of both pieces and longer overall life. Harder pistons are preferred because worn casings are easier to repair. In the case of nickel pistons, it's relatively easy to replat them slightly oversized and relap them into the worn valve casings to repair the valve section. Repair would be more costly and time consuming with worn out pistons. Your only realistic option would be to start again with brand new pistons refit to the trumpet.

Finally, I was amazed by the performance of our pistons. I knew they'd win, but I had no idea just how much longer they would last. The actual count on the machine was 1,009,100 strokes, which is no small feat. It's difficult to put that into real world terms, but the fact that the nickel pistons lasted 10 times longer than the monel is very

telling. In fact, the 390 could be run even longer. I only stopped the test because my point was made and it had to stop some time. Based on the amount of wear between 500,000 and 1,000,000 strokes I have a good feeling the 390 has at least another 500,000 strokes in it and that's still with only one oiling.

**Test #3 Winner:** Obviously, without a doubt, the clear winner is the 390.

So what does this mean to you as a player? One million strokes on a piston may not be regularly achieved, but it's nice to know that you could do it. The real lesson is that, despite what the "big boys" tell you, monel is not the superior piston material. It may function well for some manufacturers in the short term, but the overall quality is sub par in comparison to nickel plated pistons. In the case of some trumpets, you're faced with low quality materials built with little or no craftsmanship leaving you with slow valves that may corrode in place overnight.

Another lesson to take away from this is that nickel plating is not the end all answer for piston performance. It's possible to build cheap, inferior nickel plated pistons. Generally speaking, these pistons are made from monel and covered with a very thin or "flash" layer of nickel plating. As with anything, time and care must be taken to ensure the right materials are used and worked in the right way to create a superior finished product.

That's the kind of quality and craftsmanship you'll find in every Getzen trumpet. From student cornets to professional trumpets, every Getzen valve section is built from the same quality materials, using the same skilled techniques, and tested to the same high standards. After all, there's a reason why we have the courage to cover our horns with a lifetime valve warranty while other companies only feel comfortable with a year or less.

## *Battle of the Bands*

On January 2, the University of Wisconsin Badgers faced off against the Auburn University Tigers in this year's Capital One Bowl. Not only did the game bring together a Big Ten powerhouse and an S.E.C. force, but it also showcased two of the nation's premiere marching bands. What made this game in Orlando, FL different from any other bowl game is that both bands performed on Getzen instruments. While the Badgers came out on top, both bands gave their fans something to be proud of.

The University of Wisconsin has used Getzen trumpets and trombones for years. Most recently, they purchased one hundred 900 Eterna Classic trumpets and seventy-five 351 trombones all in silver plate. This year Auburn University purchased sixty-two 700S trumpets.

Both Wisconsin and Auburn purchased custom cases for their instruments. The cases feature each band's logo embroidered on the outside and show off each of the school's colors. Anyone seeing a member of the band on their way to practice will have not doubt where they play. Auburn also had the band's logo etched on the bell of each trumpet adding that extra touch of school pride.

Both the custom cases and etching are available to any school looking to upgrade their marching band program. Not only does it provide the band with top notch, Getzen instruments, but also with that special touch on and off the field.



# News From the Factory

## Welcome On Board Dave Surber

In October Tom Getzen proudly announced that Dave Surber, formerly of LeBlanc, would be taking over as Getzen's new Sales Manager. Tom announced, "Dave has an extensive industry background in manufacturing service and sales. He'll work closely with our dealers and District Managers to provide the quality instruments and service they and their customers expect from us."

"Working recently with Tom, I understand his sense of responsibility to school music dealers. He knows it's their dedication and support for local music educators and programs that is the back bone of this industry. We want to support them as best we can with our sales doctrine and the instruments we manufacture." Surber continues, "Getzen also has great relationships with performing artists. This really helps guide us in our instrument development. I'm looking forward to working with them to continue the growth, development, and refinement of the Getzen Company product line."



*Dave Surber, Sales Manager*



## Protective Trumpet Socks

Introducing Getzen Instrument Socks designed to protect your trumpet or cornet from surface scratches and oxidation. The socks also prevent moisture from absorbing into the lining of your case. Instead of trying in vain to keep your case clean and dry, you can simply machine wash the dirty sock again and again. All brand new Custom Series trumpets and cornets come with an Instrument Sock as well as plated Eterna trumpets and cornets.

## New 3895 Flugelhorn With Gold Brass Bell

Working to improve our professional instruments, we are eager to offer the ground breaking 3895 Custom Series flugelhorn with an optional gold brass bell.

The bell dimensions match that of the standard 3895 and provide the same feel and intonation. However, the use of gold brass creates a wonderfully rich and smoky sound many desire from their flugelhorns.

Just like the 3895, the 3895GB is standard with a third slide trigger and the outstanding 'Tone Branch' bell to valve section tube. This creates a free blowing flugelhorn with unmatched intonation and response.

For more information visit your local dealer or stop by [www.Getzen.com](http://www.Getzen.com) today.



# Nickel vs. Monel: The Battle Rages On

by Brett Getzen

I suppose a better title would be "Us vs. Them". Regardless, one of our proudest accomplishments is the reputation we've earned for having such great valves. Still, we're asked why we use nickel plated pistons. Why not follow everyone else and use monel? The answer's pretty simple. We use nickel plated pistons because they're the best.

Are they cheaper to make? Nope. You could make a cheap plated piston, and some do, but that's not how we do it. Are they faster to build? Not a chance. Over the years we've made both plated and monel pistons and the extra steps needed to properly make a plated piston almost double the labor time. In a business where labor is the biggest cost, that's significant. So again, why do we use a more expensive and time intensive product? As I said, they're the best.

When considering the quality of a valve section there are three factors to look at. First is overall build quality. No matter what material is used, poor construction will doom any valves. Second is the surface condition of the pistons. Ideally, a trumpet piston needs to be both smooth and hard. This determines how fluid the action is, how well it will wear, and even how much affect corrosion will have. The third factor is overall lifespan, which is generally determined by a combination of the first two. A well built valve section made from low quality materials won't last nearly as long as one built with high grade metals.

I developed three tests to determine the quality of trumpet valve sections. The Getzen trumpet tested was a 390 student horn with nickel pistons I took right off the shelf. The second trumpet was a competitor's student horn with monel pistons. For obvious reasons, I won't name names and will just refer to this horn as Trumpet X. I will say many of you have probably had some experience with the manufacturer and leave it at that.

## Test #1: Build Quality

Simply measuring key points of the valve section gave me a fairly good indication of the build quality. The three benchmarks I used were the outside diameter of the pistons, inside diameter of valve casing number three, and the amount of air pressure each trumpet held.

While the overall sizes were different, the gap on both horns was the same. However, Trumpet X held almost 1/3 lb less air, coming in below our standard for new horns. The low air pressure was caused by the lack of consistency in the piston diameters. Each piston on Trumpet X was narrower at the top than at the bottom. This allowed air in the valve section to escape from the top of each valve resulting in poor compression.

Initial Measurements		
	390	Trumpet X
Air Test	1.2105 lbs	.8947 lbs
Piston #1 O.D.	.6485"	.6695"
Piston #2 O.D.	.6485"	.6695"
Piston #3 O.D.	.6485"	.6695"
#3 Casing I.D.	.6520"	.6730"

**Test #1 Winner:** Tighter fit and higher compression put the 390 on top.

## Test #2: Surface Condition

The most important factor of piston quality is the surface condition. Valve action depends on how smooth the pistons are, durability is dependent on how hard the metal is, and corrosion resistance is reliant on both factors. Let's take a closer look at the three.

### Smoothness

First, it's important to note that nickel plating is very dense which creates a lubricious surface. In plain English, that means the piston surface is so smooth that it feels wet even when completely dry. Now that's smooth. Monel on the other hand has a very grainy surface once annealed. This graininess causes pistons to drag and provides a place for acids and dirt to take hold, which can cause rapid corrosion.

Second, one of the most time consuming steps in piston construction is the final lapping. This process of working pistons into the valve casings can make or break any trumpet. In an effort to save time and money, many of our competitors cut corners when it comes to lapping. In some cases, student and intermediate level instruments aren't lapped at all. Proper fit and valve action are sacrificed to cost cutting. Another common trick is to use a high grit-lapping compound. The benefit to the manufacturer is that the pistons can be lapped to size very quickly. However, the coarse grit leaves a surface covered with tiny intersecting scratches known as cross hatching. Cross hatching can cause uneven wear, sluggish valve action, and pistons depressed off center to actually bite into the casing wall. Cross hatching can also hold dirt and saliva, again speeding up the corrosion process. To prevent that from happening, we lap our pistons with a fine grit compound. This not only creates a smooth, even surface, but also a tighter fit. While it takes longer to lap this way, the finished product can't be beat.

### Hardness

Surface hardness is key to long lasting valve action. No matter how tight your tolerances are or how smooth the surface is, if the piston is soft it will quickly wear out. Most importantly, the surface needs to be consistently hard. Varying areas of hardness will cause uneven wear which not only slows the pistons, but can also damage the inside of the valve casings.

The common argument in favor of monel is that it's harder than nickel. This may come as a shock, but that's true. Monel is harder... in its original state. However, monel is very susceptible to annealing. That is softening due to exposure to high temperatures. High temperatures like those needed to braze in piston liners. That's right, a process used to turn a piece of monel into a piston is the very thing that ruins it. You're left with a surface that's hard in some spots and soft in others, mainly around the ports. The soft spots wear faster than the rest of the piston resulting in a poor fit and slow, sluggish action along with air leaks and compression loss. Not exactly what you want from a trumpet piston.

Nickel on the other hand is much less susceptible to annealing. The temperatures required are much higher. What little annealing may occur is negated by the extremely hard nickel plating which creates a consistently hard surface. This provides you with even wear throughout the life of the piston. Not only that, but the hardness makes nickel plating an ideal bearing surface and allows it to be honed to amazingly tight tolerances. All ideal attributes for building trumpet pistons.

I had a local metal treater test some tubing for me. They tested the surface hardness of raw and annealed monel as well as raw and plated nickel. In the chart below, the higher the number the harder the metal surface. I think the results speak for themselves.

Metal Hardness		
Metal	Hardness	Rank
Raw Monel	64	2nd Hardest
Annealed Monel	59	Softest
Raw Nickel	60	2nd Softest
Plated Nickel	75	Hardest

Now you may be asking yourself why not just nickel plate monel. Those of you that asked, pat yourselves on the back. That's the only way to build a decent monel piston. However, nickel plating over monel is not as durable as plating over nickel. Starting with nickel tubing provides a stronger bond between the layers as well as a piston with a built in safety. That is, if and the nickel plating does wear, you're left with an exposed section of nickel tubing. While it's not as hard as the plating, the nickel

tubing is harder than an exposed piece of annealed monel would be. That means your pistons will still perform and hold up well until you can have them replated.

### Corrosion

Any and all pistons can corrode. It's just a fact. If they aren't cared for, this corrosion happens sooner rather than later. The key is to prevent corrosion as long as possible, therefore extending the life of your trumpet.

So what causes corrosion? Basically, the answer is your spit. Acids in your saliva combine with dirt in your valve section to form a piston killing mixture of sorts. This mixture most aggressively attacks soft or worn areas on the piston's surface. As the surface corrodes it becomes rough. The problem grows exponentially as more dirt builds up in these rough spots and causes more corrosion, which makes the surface rougher and so on. This corrosion and roughness can get so bad that, left unchecked, brass from the valve casings will actually begin to deposit on the pistons. Once this happens, the valve section is, for all intensive purposes, ruined.

Our pistons are built with this in mind. The hard, smooth surface created by the nickel plating protects the piston. The extreme density and corrosion resistance of nickel plating offers no place on the surface for acids and dirt to attach themselves. Think of the plating as a force field of sorts repelling the piston's attackers.

Monel on the other hand doesn't offer this protection. Not only the failings of the metal itself, but also the corner cutting of other manufacturers creates pistons that might as well be sponges. The soft areas caused by brazing quickly wear creating microscopic pits. These pits act as tiny little hooks grabbing on to acid and dirt causing corrosion to spread quickly over the piston. In the end, you're left with a piston surface that's more like sandpaper than a bearing. Not exactly what you want from such a crucial part of your trumpet.

**Test #2 Winner:** With harder, smoother, and therefore more corrosion resistant pistons, the 390 is obviously the winner again.

### Test #3: Life Span

Finally, the most telling test of all was how long monel pistons lasted in head to head competition with our nickel plated pistons. After all, that's the true mark of quality.

### Pre-Test

The first thing I did was have both valve sections disassembled and cleaned. Each piston was oiled using standard Getzen valve oil, reassembled, and air tested. The whole point of this was to ensure that each horn was treated the same way and entered the test in the same condition.

### The Test

The way I tested the piston life span was pretty simple. Each trumpet was mounted into a machine built for just this purpose. A small bench motor attached to an arm mechanism that moved up and down when turned on. The travel of the arm was set to the exact travel distance for the pistons being tested. When everything was set up, the machine ran the trumpet valves at 300 strokes per minute.

At this point, it's important to keep in mind that the test was not intended to simulate actual playing conditions. It was more of an overall quality test. I equate it to automakers testing seat cushions. They repeatedly drop a 50 pound weight onto a seat to test its construction. That isn't a real world test, but it does show the seat's durability. That's what this test was intended to do. Also keep in mind that, over the duration of the test, both trumpets were treated the same way. Both were only oiled once and each trumpet was exposed to breath and moisture after 100,000 strokes. As the machine ran, I blew through the horn for a few minutes to introduce saliva in order to test the pistons' corrosion resistance.

At somewhat random points along the way, I stopped the test to take measurements of the pistons, casing, and compression. For the sake of space, the starting and finishing results are shown here.

## Trumpet X Test Results

	Starting Numbers	128,800 Strokes	Loss
Air Test	.8947 lbs	.7368 lbs	.1579 lbs (17.6%)
Piston #1 O.D.	.6695"	.6670"	.0025"
Piston #2 O.D.	.6695"	.6675"	.0020"
Piston #3 O.D.	.6695"	.6670"	.0025"
Casing #3 I.D.	.6730"	.6740"	.0010"

Trumpet X was stopped after 128,800 strokes. At that point, the pistons were so corroded, that they locked in place while the machine was running. As soon as I pulled a piston, I could plainly see why. Corrosion covered the surface of all three pistons making it impossible to continue the test.

It's very telling to see what kind of wear took place on Trumpet X. The wear not only destroyed the valve action, but it completely ruined the compression of the trumpet. While it wasn't up to our standards to begin with, the compression was still enough that the trumpet could be played with some success. However, after losing over 17% of its air pressure, Trumpet X was left almost unplayable. At this point, the only thing that could save the horn would be a complete piston rebuild.



*Notice the wear and corrosion on Trumpet X's pistons. Especially the large amount on #2 and #3. Also note the yellow discoloration of the pistons. This is brass that has been deposited on the pistons from the valve casings. At this point all three pistons were ruined and no longer functioned.*

## 390 Trumpet Test Results

	Starting #'s	128,800	1,000,000	Loss
Air Test	1.2105 lbs	1.2105 lbs	1.1579 lbs	.0526 lbs (8.7%)
Piston #1 O.D.	.6485"	.6485"	.6475"	.0010"
Piston #2 O.D.	.6485"	.6485"	.6470"	.0015"
Piston #3 O.D.	.6485"	.6485"	.6475"	.0010"
Casing #3 I.D.	.6520"	.6525"	.6545"	.0025"

As you can see, the 390 lasted much, much longer. At the 128,800 mark there was almost no change to the pistons, casings, or compression. In fact, the only measurable difference was .0005" worth of wear to the valve casing. Where Trumpet X was ruined, the 390's valve action was still smooth, fast, and showing no signs of slowing down.

Now fast forward to 1,000,000 strokes. At this point there was some wear to the valves. However, the valve action was still smooth and fast. Most importantly, the trumpet still tested at over one pound of air. This means that the 390 trumpet still had enough compression to meet our new horn standards. Also, while the pistons looked used, they were still corrosion free with all of their plating intact.

There are two key factors to note about the test results. First, the nickel plating stayed corrosion free during the entire test. This is important because corrosion is like cancer for trumpet pistons. The monel pistons in Trumpet X quickly failed once corrosion started. All it took was a small amount of acids via saliva to expose the weakness of the monel.

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