

About 3 weeks ago I received a call from Craig Libuse from the Craftsmanship Museum and Joe Martin Foundation, informing me that I have been selected as Metalworking Craftsman of the Year for 2012. This came as a total shock and I thought that others may be interested. The first part of the information, listed below is the press release, with an abbreviated version towards the end. The final two pages will be the handout given away at the NAMES Engineering show in Wyandotte Mich., on April 20-22.

Gary Conley—a Hard-won Success Story in Miniature

The Conley name is well known in the model engine field. Gary's original ¼ scale V-8 was available for many years in finished and kit form. The story of the production of that engine, plus a Viper V-10 and the tragedy that resulted in the design of the new Stinger 609 V-8 is one of both talent and perseverance. There are not many people who can make a living in model engineering, but Gary has managed to do it for over 30 years despite setbacks that would have caused most others to give up. Luckily for the world of small engines, Gary Conley didn't, and his latest creation has just hit the market.

“Perfection is almost good enough.”

The motto at Conley Precision Engines is “Perfection is almost good enough”. This is a motto that Gary tries to live by daily. He says he has found that it is better to explain a delay than apologize for the quality of workmanship later on. His business has been in the same location and has grown steadily over the past 30 years, and he firmly believes this longevity was due in part to the way my customers are treated. The customer loyalty he inspired through the quality of his craftsmanship paid dividends when he really needed it as you will see.

A start in teaching makes way for chasing his own dream

After completing his Masters Degree in Industry and Technology at Northern Illinois University, Gary spent about five years teaching Vocation Machine Technology at Morton West High School in Berwyn, Illinois. During this time he involved many of his advanced students in machining and constructing various steam and internal combustion engines. When education became more “baby sitting” than teaching, he decided to start his own business with one product, a very limited budget, and a lot of hopes and dreams. He stresses that without his wife, Cheryl, none of this would have been possible. She has allowed him to “chase a dream” for almost 30 years.

The first V-8 engine of over 30 years ago was crude in comparison to his current engine. It was machined completely from billet material. Each component was hand made without the use of any CNC equipment. During this time the engine went through some major changes. Being on a limited budget, it was difficult to make significant running changes in the production and machining. As money became available it was spent on new machines. He eventually went from one Anilam CNC retrofit on his Bridgeport Mill to three additional pieces of CNC equipment. Since he is not a “job shop” there are now several machines, each dedicated to a specific purpose.

Going from billet to cast parts

Another significant change was having a lot of the parts cast. Some of the parts were “sand cast” while others were either “die cast” or “investment cast.” Not only did this alter the appearance of the engine but allowed for considerable internal changes. The most notable of these was the investment cast crankshaft and connecting rods. This allowed Gary to increase the bore from .750 to .952. Over the years there have been too many changes to list.

Chrysler asks for a model Viper V-10

There were plenty of ups and downs during this time, but in 1996 two representatives from Chrysler approached Gary. Since he was already making a V-8 engine they asked if he would consider building a ¼ scale Viper V-10 engine. At that time he was contemplating building a ¼ scale V-12, and after some serious thought the V-10 seemed to be the logical choice. After receiving a licensing agreement from Chrysler the next step was to get a full-size engine for the purpose of “reverse engineering.” One day he got a knock on the door and a truck unloaded a complete Viper V-10 engine in his driveway. At that point he began to wonder, “What have I had gotten myself into?”

Since this engine was mainly a façade with limited internals, it was totally dismantled and each piece was then analyzed and evaluated to see if the engine could actually be reduced to ¼ scale. Little did he know that this was only the beginning of a very long “uphill battle.” Some of the molds he made himself, but a good friend of his, Ken Bennett from Topaz Engineering, made one of the most complicated molds for the head and runners for the intake and exhaust ports.

There were many technical problems to be solved including eliminating RF interference in the ignition system and oiling problems. (Not too little but too much!) The entire project should have only taken one to one and a half years. In actuality it took almost 5 years.

With production near, tragedy strikes

All of that hard work, it was all about to pay off, but then Gary received possibly the most devastating phone call of his life. The foundry that was doing all of his castings had been consumed in a catastrophic fire that had destroyed everything. All of the V-8 and V-10 molds were gone, and there was no insurance to cover any of his losses!

For the next three days after getting the bad news Gary says he just sat in his office and cried. If that were not bad enough, all of the deposits for every engine had to be returned. It would have been very easy to declare bankruptcy, but for Gary this was not an option. He had built a company on honesty and integrity and could not do that to his customers, but at the time no other alternatives seemed to present themselves.

Taking business in a new direction keeps the dream alive

About that same time the company that was making the model carburetors that were used on his engines was being sold. With some very strong soul searching and lengthy conversations with his wife, he decided to purchase the entire line of Perry products from Varsane Manufacturing. This included not only the model carburetor line but also the model engine pumps and fuel control valves. This purchase proved to be his “saving

grace.” Slowly, all of the deposits were returned and he started to see a little light at the end of the tunnel. Things have continued to improve, and after exhausting his entire existing V-8 parts inventory, in the fall of 2005 he decided to build another V-8 engine.

Surviving V-10 molds give life to a new V-8

The only things that he had retained from the fire were all of the masters from the V-10 engine. Instead of trying to revive the V-10 project, the decision was made to modify and shorten the V-10 into an all-new V-8 engine. Something called “transferable knowledge” became very evident when he decided to build the new engine. Remember, almost five years was spent on its design and construction. Some of the internal components did not change, and since he had a lot of parts in stock he put them to good use on the new engine. Surprising, the only molds that survived the fire were the mold for the head and the mold for the intake and exhaust runners. With a lot of measuring and careful machining, the mold for the V-10 head was shortened to make a great V-8 head. The runners did not change. Somehow, all of the masters were modified for the new “Stinger 609” engine. The rest, as they say is history, the new engine is now in production, and Gary is most grateful to the many customers who stood by him through good times and bad.

About the new Stinger 609

The name is derived from the displacement: 6.09 cubic inches or almost 100 cc. This engine is the culmination of almost 30 years of knowledge gained in the designing and construction of model engines. The new Stinger possesses no parts used in prior V-8 engines. The bore is 1.00", with a .970" stroke. It weighs about 11.25 pounds and measures approximately 14" long (from the front timing belt to the end of the transmission), 6" wide, and 8-1/4" tall. The supercharged version is about 10" tall. More details can be found on Gary's web site at www.conleyprecision.com.

Among the numerous innovative features like the large oval shaped intake ports, "D" shaped exhaust ports and investment cast parts, two bold attributes stand tall: the dry sump pressurized oiling system and a full ignition system firing the tiny 10-40 threaded spark plugs. The engine even has a user replaceable oil filter, and there are a number of performance and dress-up options. A transmission with forward-neutral-reverse is expected in the very near future.

In fact, the engine is so good looking it has been featured as a magazine centerfold. You can find it in the middle of issue #26 of [Model Engine Builder](#) magazine along with an article on the development of the engine.

From Despair to Metalworking Craftsman of the Year

The Joe Martin Foundation is proud to award Gary Conley a \$2000 cash prize, engraved gold medallion and the title of “Metalworking Craftsman of the Year” for 2012. Gary is the 17th winner of this prestigious award. The award will be presented to Gary in person at the North American Model Engineering Society Exposition (www.namesexposition.com) in Wyandotte, Michigan April 21, 2012. The public is invited to attend the Midwest's largest model engineering show to meet Gary and to see and hear the Stinger 609 in action. More photos of Gary, his shop and his engines can be seen at www.CraftsmanshipMuseum.com/Conley.htm.

About the Joe Martin Foundation for Exceptional Craftsmanship

The foundation was established by Joe Martin, the owner of Sherline Products Inc., a manufacturer of precision miniature machine tools. Mr. Martin has dedicated the profits from this company to support excellence in craftsmanship at the small end of the size scale. The foundation is a 501(c)(3) non-profit organization under U.S. Tax Code. All monetary and museum project donations are tax deductible from Federal and State taxes. Learn more about the foundation and its goals on their on-line museum web site at www.CraftsmanshipMuseum.com.

(1653 words)

PRESS RELEASE, SHORT VERSION

Gary Conley selected as “Metalworking Craftsman of the Year”

Carlsbad, CA—Gary Conley was recently selected as the Joe Martin Foundation for Exceptional Craftsmanship’s Metalworking Craftsman of the Year for 2012. Gary has long been known in model engineering circles for the ¼ scale V-8 engine he produced and sold in finished and kit form for many years. After five years in the development of a running ¼ scale model of the Viper V-10 engine, a tragic fire at the foundry destroyed all of Gary’s molds for both engines.

After returning all the customer deposits on future engines, rather than declare bankruptcy, Gary went back to work and adapted a few of the remaining parts and some relatively undamaged mold masters to design a new V-8 engine based on a shortened Viper design. The new 6.09 cubic inch ¼ scale V-8 is called the “Stinger 609” and is now available in naturally aspirated and supercharged versions.

Gary has been following his dream of building miniature engines for over 30 years and is one of the few to make a living in model engineering. It has not been an easy path, and we offer our congratulations to Gary on the production of this new engine. Where it would have been easy to give up, Gary has lived by his motto, “Perfection is almost good enough” throughout it all, and the world of model engineering is better for it.

The Joe Martin Foundation, a 501(c)(3) non-profit organization under U.S. Tax Code supports outstanding craftsmanship at the small end of the size scale. Gary and over 100 other fine craftsmen are featured on their web site at www.CraftsmanshipMuseum.com. The foundation also hosts a 16,000 square foot museum in Carlsbad, CA that displays over 500 examples of fine craftsmanship including engines, clocks, guns, models and tools—all in miniature. Gary will receive an award of \$2000.00 that will be presented at the North American Model Engineering Society Exposition in Wyandotte, MI on April 21, 2012. The public is invited.

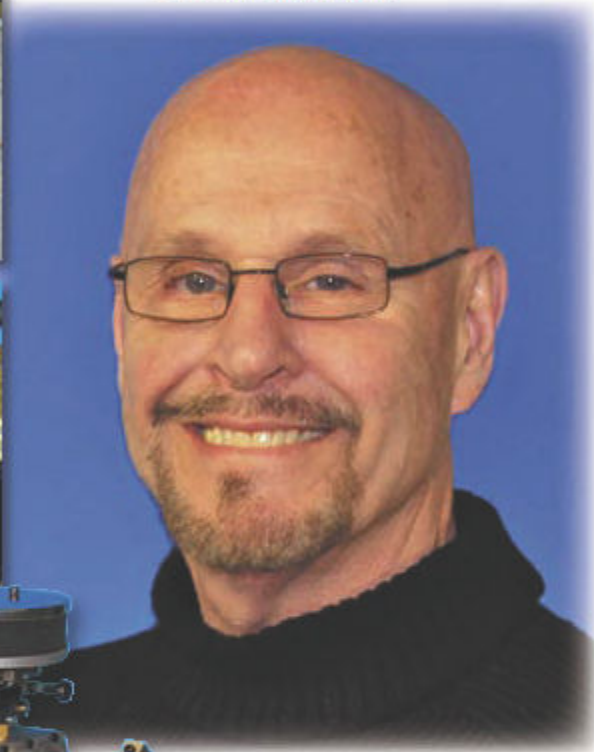
Gary’s work and biography can be seen at www.CraftsmanshipMuseum.com/Conley.htm or on his own web site at www.ConleyPrecision.com.

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Joe Martin Foundation Metalworking Craftsman of the Year—2012

Gary Conley

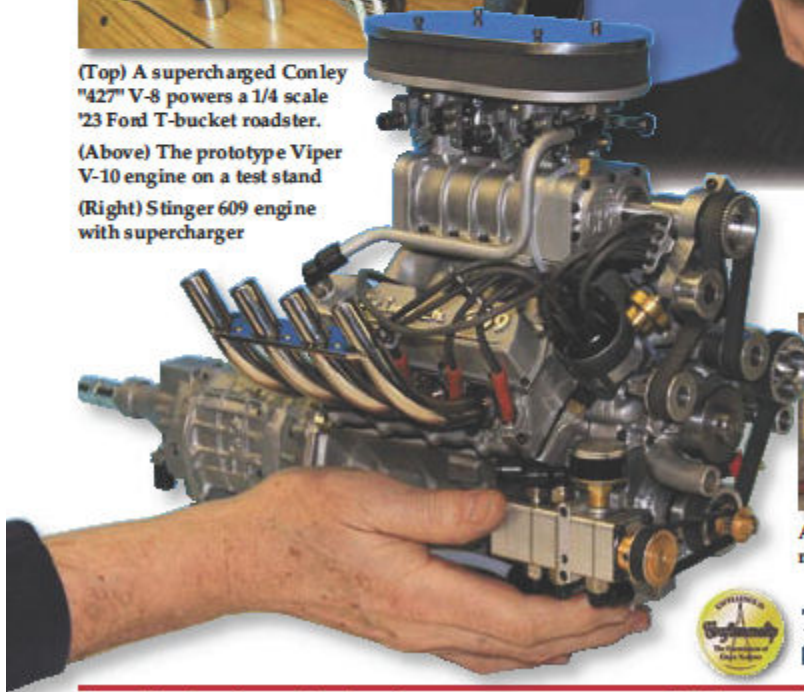
Glen Ellyn, IL



(Top) A supercharged Conley "427" V-8 powers a 1/4 scale '23 Ford T-bucket roadster.

(Above) The prototype Viper V-10 engine on a test stand

(Right) Stinger 609 engine with supercharger



A Stinger 609 powers this 1/4 scale model of a top fuel dragster.



**The Joe Martin Foundation
for Exceptional Craftsmanship**

To visit Gary's section in the museum see www.CraftsmanshipMuseum.com/Conley.htm.

About Gary Conley...

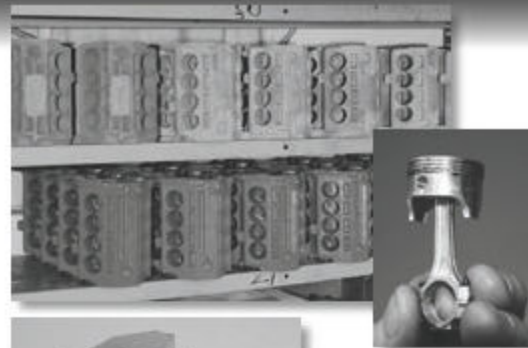
The motto at Conley Precision Engines is "Perfection is almost good enough". This is a motto that Gary tries to live by daily. He says he has found that it is better to explain a delay than apologize for the quality of workmanship later on. His business has been in the same location and has grown steadily over the past 30 years, and he firmly believes this longevity has been due to the way customers are treated.

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His first engine, the Conley "427" V-8 was built in limited production in his basement shop for a number of years without the use of castings or CNC and sold as a completed engine or a kit. After an offer from Chrysler, Gary spent 5 years scaling a Viper V-10 engine for production. Then, a catastrophic fire at the foundry destroyed all the patterns and molds for both engines, leaving Gary to start over from scratch.

He decided to salvage what he could from the parts for the Viper project and designed a new V-8 based on a shortened Viper engine. The new Stinger 609 is now in production in Gary's home shop and is offered in naturally aspirated or supercharged versions. It gets its name from the 6.09 cubic inch displacement and features a pressurized dry sump oil system, electronic ignition, 6-bolt mains and electric starter.

Gary is one of the few model engineers to be able to make a living doing what he loves. While refusing to compromise when it comes to craftsmanship, he overcame all challenges to provide great engines to the model engineering community for over three decades.



Above left: Stinger 609 engine block castings await machining.

Above right: A Stinger piston and connecting rod. The engine has a 1" bore and .952" stroke.

Below: The original bar stock Conley V-8 was available in finished or kit form.



Above: The Conley "427" V-8 could be purchased with a supercharger.



Left: Gary's work has been featured in many magazines and even on TV. Here he is seen with Tim Allen on a special edition of "Tool Time" that featured model engines. The model Cobra in the foreground is fitted with a Conley "427" V-8.



The purpose of the Joe Martin Foundation is to recognize and reward excellence in craftsmanship with emphasis on projects at the small end of the size scale. Mr. Martin is the owner of Sherline Products, a manufacturer of precision miniature machine tools. The Foundation hosts both an on-line museum and physical museum in Carlsbad, California. Both are free for all to enjoy.

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