

The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 109

May 2005

© 2005 NEMES

Gazette Staff

Editor Victor Kozakevich
 Publisher Bob Neidorff
 Events Editor Bill Brackett
 Meeting Notes Max ben-Aaron

NEMES officers

President Norm Jones
 Vice Pres. Steve Cushman
 Treasurer Rob McDougall
 Secretary John Wasser
 Director Mike Boucher

NEMES web site

<http://www.neme-s.org>

Contact Addresses

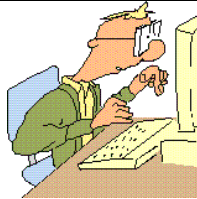
Victor Kozakevich, Editor
 4A Sherman St
 Cambridge, MA 01238
vkozak@att.net

Norm Jones, President
 28 Locust Rd,
 Chelmsford, MA 01824
 (978) 256-9268

Rob McDougall, Treasurer
 357 Crescent Street
 Waltham, MA 02453
nemestreasurer@comcast.net

Bob Neidorff, Publisher
 39 Stowell Road
 Bedford, NH 03110
Neidorff@ti.com

Bill Brackett, Event Editor
 29 East Main St
 Northborough MA 01532
wbracket@rcn.com



Editor's Desk

Victor Kozakevich

In these days of rising energy prices, I'm intrigued by some approaches to improve efficiency of systems. An article in the newspaper mentioned a "hybrid" home furnace designed by Honda. It is basically an engine and generator modified to run on natural gas. Capture the engine's waste heat to warm your home, and use the electricity generated to run your appliances. Hey, you could run the thing on used French-fry oil and it's practically a form of perpetual motion.

I was doing some web research and stumbled into a site describing a model OX-5 aircraft engine. A company specializing in model auto and aircraft engines makes them from investment castings and machines on CNC mills. Have a look at the site mentioned on the last page of this Gazette. It's great stuff. I just wish that I could pay for it with scale dollars.

We're having a real machinist discussion at the next meeting. Thanks to all involved for making it happen. Hope to see everyone there.

Vic

Next Meeting

Thursday, May 5, 2005

7:00 PM. Meetings held at:
 Charles River Museum of Industry
 154 Moody Street
 Waltham, Massachusetts

Membership Info

Annual dues of \$25 (via checks made payable to "NEMES" and mailed to our treasurer) for the calendar year are due by December 31st of the prior year.

Missing a Gazette? Send mail or email to our publisher.

Addresses are in the left column.

Contents

Editor's Desk.....	1
President's Corner.....	2
The Meeting	3
Treasurer's Report.....	4
Tool Time	4
Shaper Column	5
In the News.....	11
For Sale.....	11
NEMES clothing	12
Upcoming Events.....	13
Web Sites of Interest	13



President's Corner

Norm Jones

The Meeting

This month, Steve Cushman, Errol Groff, and Bob Neidorff will present a panel discussion entitled: "Different Approaches to Sharpening Drills". You can spend \$5000 on a drill sharpener, or as little as \$10 on a device that claims to do the same thing. Join us for a spirited discussion of the basic challenges of sharpening drills and hear three people explain their approaches. As a bonus, Richie Saporetti of Greenfield Cleveland Twist Drill, a division of Kennametal, will give us a short presentation on drilling, drill point angles, drill materials, drill surface coatings, and diagnosing drilling problems. Richie's a very knowledgeable, experienced person with a background as a toolmaker. Following these talks will be time for others to present their approaches and ask questions. Afterwards is a demonstration of different sharpening machines.

Annual Trip to Detroit for the North American Model Engineering Show

Thursday morning April 21st, Ron Ginger, Rollie Gaucher, Dave Osier, and I met at Rollie's to set off for Detroit one more time. This has been our tradition for fourteen years. The show will be moving to Bowling Green Ohio next year. It is a long ride to Detroit, but with lots of good conversation, the time passes quickly. We stopped at Niagara Falls mid afternoon for an extended break. The falls are always an awesome sight. This year "The Maid of the Mist" was already in service and there was very little ice in the gorge next to the American falls in spite of a tough winter. I look forward to seeing the various landmarks along the way, such as the steam museum and general heavy industry in Hamilton Ontario. Passing over the Blue Water Bridge from Sarnia, Ontario to Port Huron, Michigan gives quite a view of Lake Huron as well. We arrived at Ron's Dad's home in Detroit at around 8:15PM. We all enjoy seeing Ron's dad each year.

Traditionally, our first stop on Friday morning is Production Tool. The folks there greet us with open arms. They presented each of us with a small gift, knowing that we will not be back next year. Thanks very much to the staff for the gifts and the pleasant conversation that we have enjoyed over the years.

Next stop was the show site to set up our displays. Friday we get to see old friends and catch up on everyone's projects. There are lots of folks that we only see once a year. I enjoy talking with friends as much as I like to see the various models on display.

Later in the afternoon, we went on the Ford Rouge Factory Tour. Ford used to have a tour at their assembly plant many years ago, but discontinued it. The new tour, which has been offered for about a year, has become Detroit's most popular tourist attraction. If I didn't own a Ford prior to going on the tour, I might be inclined to buy one after wards! This is a state of the art facility covering 10.4 acres. The first stop is the "Legacy Theater" where one views archival footage highlighting the past. The second stop is the "Art of Manufacturing Theater" which shows how vehicles are built in the 21st century. This theater employs all sorts of "Disneyworld" special effects. Next is a trip to the observation deck where one can look out on the 500,000 sq ft "Living Roof" atop the Dearborn Truck Plant Final Assembly building as well as the surrounding area. The last part of the tour is a walk of about $\frac{1}{3}$ mile inside the plant viewing various assembly operations from a 16' high mezzanine. One of the many guides reminded us that we were not even half way through, with the closing time of 5:00PM rapidly approaching. I highly recommend the tour to anyone who visits Detroit. Check out www.thehenryford.com for more info.

Saturday and Sunday were very busy days at the show with lots to see and many tempting items to take home. The spectator crowd was good sized on Saturday in spite of moderate snow falling outside. Fortunately it did no stick to the ground but did manage to accumulate 4" on grassy surfaces. The weather may have contributed to some early exhibitor departures on Sunday morning. I will miss the annual trip to Detroit, but also look forward to going to Bowling Green, Ohio next year. The new location presents an opportunity to make new friends and see more great workmanship. See you all on May 5th.

Norm



The Meeting

Max ben-Aaron

The Customs Tower Clock

Our speaker for April, David Hochstrasser, told of the trials, tribulations and triumphs of restoring the clock in Boston's famous Old Customs Tower.

The Old Customs Tower (or, rather, its lowest portion) was built in 1847. It was designed to impress, in the Greek Revival style, with a facade of Doric columns, each carved from a 46-ton chunk of Quincy granite. The familiar granite tower, with 32 floors, rising 496 feet tall, was added in 1912. Until the Prudential Tower was built in 1964, the Customs Tower was the tallest building in Boston.

The original clock was an electric 'secondary clock', using an electric motor in the basement to wind it, through a height of about 6 feet, twice a day. This was an innovation for that time. In 1949 it was replaced with a clock made by the Howard Clock Company. This new clock stopped sometime around 1977.

A man with one clock knows the time; a man with two clocks is never sure. The four faces of the clock never seemed to be in sync so the clock was colloquially known as "the four-faced liar". That new clock never worked reliably.

In 1986 Boston Edison underwrote the \$250,000 cost of restoring the clock and illuminating the tower, to celebrate their Centenary. They were unable to find any company willing to take the clock restoration job until they met David and Ross Hochstrasser, owners of the Scituate Tower

Clock Company. There were many impediments to the project, including attempts to stop it. By the time the red tape was cut and the project started, only three months were left to complete the job.

The clock has one central movement and four drive-shafts, with motion works for each dial. It has a 9-foot pendulum weighing 70 lbs. The clock dial is 22 feet in diameter and each minute hand is 11 ½ feet long. The clock was driven by a 750 lb. weight, wound every 8-10 hours by an electric motor with an endless chain. The hour hands weigh 70 lbs. each.

The first job was to remove the hands. Taking the hands off at that height is not a job for the faint-hearted. The main elevator runs up to the 19th floor. Above that, there is another elevator from the 19th to the 26th floor. Because of their length, the minute hands had to be lowered to the 19th floor, taken in through a window, and then ride the rest of the way down on top of the elevator.

When moved to the workshop, it was found that the finish on the castings was poor. Many gear teeth in the works and on the escape wheel had been stripped by workmen, who, ignorant of clockwork, had forcibly moved the hands together. Several teeth on the great wheel had been sheared off. The roller bearings were completely worn and the races were broken.

It was decided to replace the old wooden minute hands, which were prone to vibration and climatic variations, with hands made of more modern materials. High-tech new hands, using foam cores covered with space-age composites were made in Rockland. The new materials reduced the driven weight enough that the driving weight could be halved, to 350 lbs. The hour hands were not replaced. All the hands were gilded with 14-Karat gold leaf, at cost of \$7000. The hands were balanced before installation.

The clock movement was completely disassembled and the clockworks were completely refurbished with new bearings and bushings. The gears and escapement were either rebuilt or replaced. The timetable was very tight, but by working long hours, the Hochstrassers managed to meet their schedule.

The building was vacated by the General Services Administration and turned over to the City of Boston in 1987. It stood idle for 8 years until a new use for it

could be found. It was then leased to the Marriott Corporation on condition that they bear the entire cost of refurbishing it. Marriott spent a fortune turning the building into time-share condos.

This plan called for the clock-room to be converted into a game room, so the Hochstrasser brothers were called in to move the clockworks from the center of the room to a corner. To do this, the shafts to the motion works in each dial had to be relocated, using universal joints.

Early in the 1990s, the original gearbox was replaced with one from Boston Gear.

David became enamored of clocks when he made a cherry-wood clock case in his 9th grade shop class. His older brother Ross caught the passion from him and began bringing home broken clocks and watches. The two brothers began to learn the craft of clock repair with the aid of library books and the help of Scotty Seitz, who ran the Hanover Clock Shop. In 1981 David became Scotty's apprentice.

David, who always nurtured the ambition of owning his own business (as his father did), bought the Hanover Clock Shop from Scotty when Scotty retired in 1988.

The brothers got their start restoring a steeple clock in a church in Bridgewater, which led to many more jobs.

As an aside, David was restoring the clock in the steeple of the Weymouth Old South Congregational Church when the church burned down, so the clock was in his workshop at the time. When the church was rebuilt in 1991, its old clock was installed in the new building.

Max



Treasurer's Report

Rob McDougall

As of 3/31/2005

Balance as of: 2/28/2005	\$7,536.70
Dues Received	375.00
Feb Show Proceeds	417.00
Shop Apron Sales	420.00
Guest Speaker Gift	-50.00
Balance as of: 3/31/2005	\$8,698.70

Rob



Tool Time

Jim Paquette's Open House

Saturday, May 21, 2005, 9:00 am – 2:00 pm

My shop is at 114 High Street in Uxbridge. High street is a right off Rte.122 about 0.2 miles south of the intersection of 122 & 16 in Uxbridge center. My shop is on the left, about ½ mile up (and I do mean up) High Street. Feel free to park in either the house or shop driveway.

Coffee and donuts will be available if Edgar doesn't eat them all.

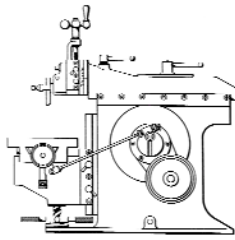
If you have something small to sell, trade or give away bring it along. There will be the usual pile of free stuff from my shop clean up.

Trimming Small Bolts to Length



This picture shows a small 110V chopsaw recently purchased for under \$20 from Harbor Freight (Item #42307). I bought it primarily as a cutoff saw for shortening BA bolts. Although it is of primarily plastic construction it is sturdily built and works well in this application. The blade supplied with the saw is two inches in diameter. The blade is steel and cuts brass bolts easily. Abrasive wheels are available from MSC to cut steel bolts. The picture shows the vise holding a homemade hex fixture for 6BA bolts, and the threaded end of a 6BA bolt is seen extending out from the fixture, ready to screw on a 6BA retaining nut and to then be trimmed. The wooden rack next to the saw holds 3 other fixtures tapped with different BA threads. If the saw is to be used to trim lengths of wooden stock, e.g., to make 45 deg miter cuts in wood for a small picture frame, or to trim planks for a model boat hull, a simple addition to the table, providing an outfeed support under the work, is recommended. Also to be devised by the user are stops for repetitive cutting to identical lengths. The saw as supplied runs at 7800 RPM and can handle cutting depths to $\frac{3}{4}$ inch.

Martin Feldman,
Owl's Head, Maine



Shaper Column

Kay Fisher

Shaper of the Month

John Rouche's Logan 7 Inch



Logan 7" Left

Photo by John Rouche

This month's story is one of acquisition and rebuild. John Rouche from California submitted this story about his 7-inch Logan. This is quite interesting to me because I owned a 7-inch Logan for a couple of years and just recently acquired an 8-inch Logan that I have just started rebuilding. Here is his story. In the first part, he is addressing the folks in the Yahoo metal_shapers group.



Logan 7" Right Photo by John Rouche

"I am new to this group and to the wonderful world of Shapers. I have a nice South Bend Heavy 10 lathe and enjoy it thoroughly. I am not a machinist, just a hobbyist in the garage. I love the old machinery the U.S. produced throughout the years and shapers just have that mechanical appeal to me. So, I have been lusting over the fine machines you all have.

I was interested in the South Bend shaper. I thought it would make a nice companion to the lathe. Imagine my surprise when I saw one on eBay. So I watched and watched as the price went from a reasonable couple hundred bucks to \$1100. I thought it must be a bidding error. So I looked at the bidder list. It's for real. Well I'm thinking there is no way I am going to be able to afford a shaper with the "rich" folks buying them up for who knows what.

I called the local used machinery dealers and there was nothing available. It seems they are interested in stocking larger machines for the moneymaking industry, not enthusiasts of smaller machinery like me. After several calls I

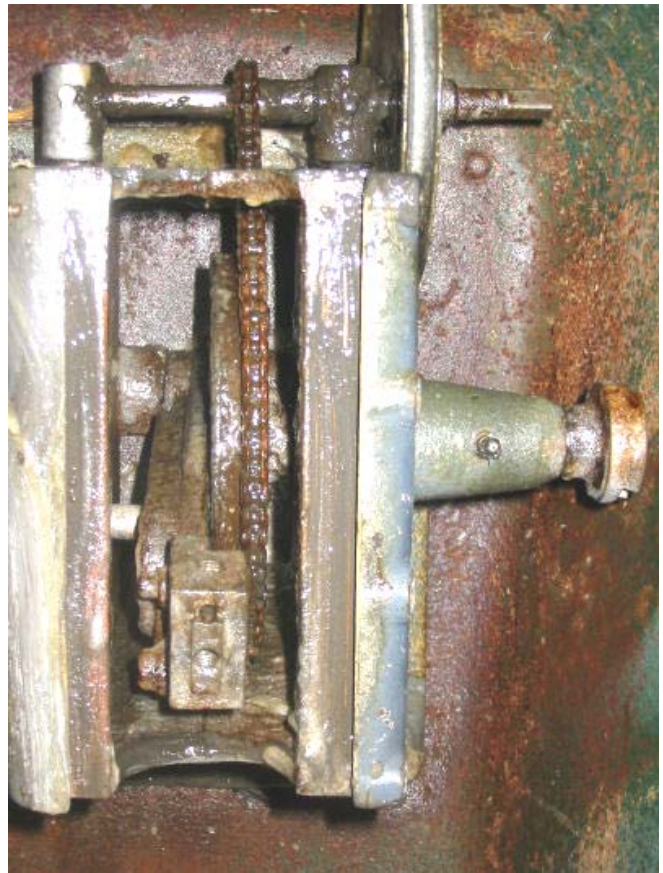
talked to a dealer who said there might be a shaper available in a "lot" he was interested in. After several weeks he didn't get the "lot". I asked him for the info of the owner of the shaper. He gave me a general description of the business where the possible shaper was stored. The directions included landmarks such as trees with no leaves and fences to keep in the dogs.

My pulse raced as I jumped in the Honda and headed for shaper heaven. I found the shop, or should I say abandoned building. My luck was holding out, I saw the owner. He was a nice enough man running his wood molding business. I asked about a shaper that he might have, referencing the info from the "dealer". He said, "No, I don't think I have one". Begging again, I asked if we could look. His shop has about 15 or 20 pieces of machinery, half of it looked like it wasn't being used. He took me to an old (ancient) shaper. It was driven by an electric motor and used wide flat belts. It was an open type construction with thin castings and quite large for its capacity. I told him I was looking for a "newer" machine. A stroll through the area produced nothing. So, we are standing there talking about his business (fascinating, but not shapers) and I'm still scanning the floor for "my" shaper when I see a "hump" of the ram I was so intent on finding. It was much smaller in real life than I imagined. I had never seen a shaper in the real. Not looking excited, I quickly cut him off from his discussion and headed to the "hump". Sure enough, it appeared to be a shaper but was covered in a nice thick coating of what I will call "preservative": old grease and wood sawdust.

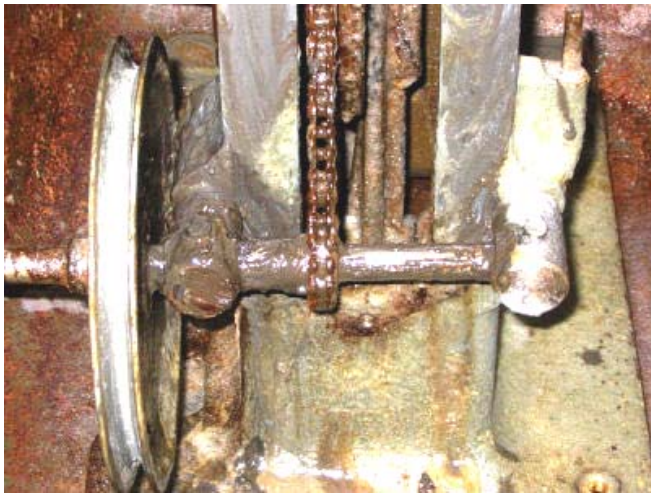


Logan 7" Before Photo by John Rouche

I looked the machine over, trying not to look desperate when I asked him "do you know what make it is" as I scurried over to the left side of the machine. He said he didn't know the manufacture just as I laid eyes on a manufacturer's tag - Logan. Wow, I said to myself, I just found a Logan shaper. I said "How much". He said he didn't know if he could sell it. Heart, jaw and excitement all dropped. I continued to pester him on the sale of the shaper. He said there was another guy interested in it and he was offered one hundred dollars for it. I thought I was sunk. Then he said "seventy five dollars". I looked around (real quick) and said oh, ok that sounds good to me. I reached down to his side, grabbed his hand, and shook the heck out of it, sealing the deal in my own way. Of course, I'm in the Honda and without seventy-five bucks so off to my wife's work to gather up the Toyota. This was Friday. I didn't want to wait through the weekend, and I needed something to tinker with this weekend.

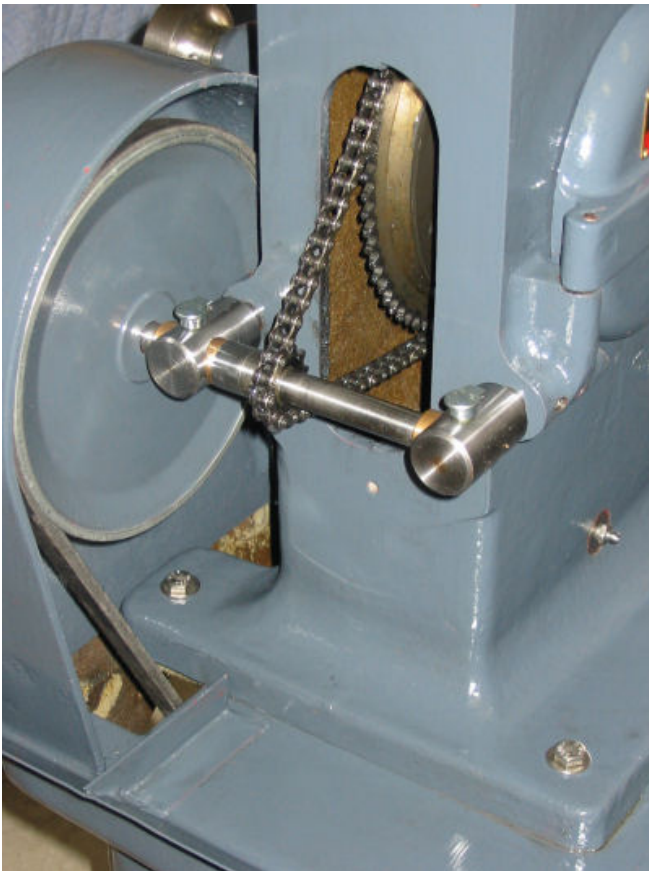


Chain Drive Before 2 Photo by John Rouche

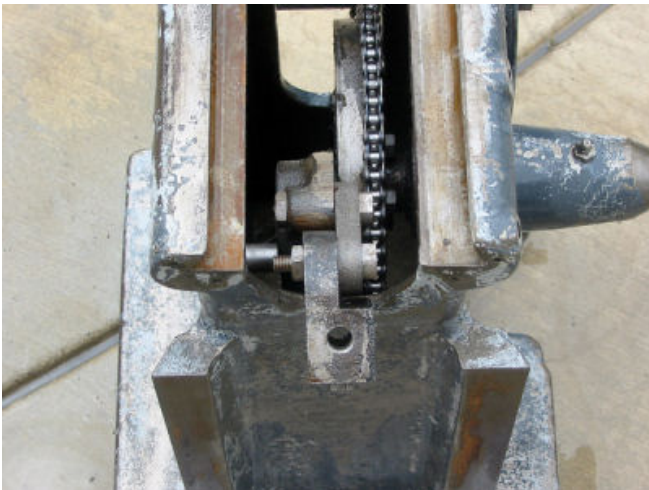


Chain Drive Before Photo by John Rouche

Unlike my normal luck, when I returned with my truck, he was still there. We slid the shaper onto the forks of his forklift, then walked it out to the truck, which is only a Toyota four runner. He looked at it and said, "are you sure it's going to fit?" The shaper, which had appeared tiny and light, was growing by the second. Sweat beads were starting to form. I remember the feeling when I bought the South Bend 10 inch lathe and loaded it in the Toyota. I felt the same way. Well after a little excitement and pushing, we finally got her in, only halfway. I said, "looks good". I proceeded to tie the five hundred pound machine down to whatever wasn't moving. As a final cap, I tied the hatch door down against the shaper, which was still hanging half out of the car. The 20-mile ride home was nice and bouncy.



Chain Drive After Photo by John Rouche



Chain Drive After 2 Photo by John Rouche

Thank God for my close proximity to Harbor Freight. I think I own every tool that has gone on sale, including the engine hoist. A simple matter of patience and forethought will get you through most heavy moves. I didn't have either; I wanted the shaper on the ground and right now, not because I'm impatient, but because I had this extremely heavy and greasy piece of cast iron in my

wife's trunk and she was on her way home. I should get a truck.



Vari-Drive Before Photo by John Rouche

So more nylon straps and I attempted the lift. Oh yeah, I'm on a slight slope. So as I lift we move forward. The shaper, the lift and I slid toward the car. Place my feet in front of the lift wheels acted as chocks. It worked, as did yanking and tugging. Picture you and your dog playing tug of war with a rope. You know how they put their whole body into it with their front side down and the back side jutting up and down and front to back. That was me tugging.



Vari-Drive After Photo by John Rouche

Eventually I made it up to the garage with it still in the horizontal position. I lowered it to the ground and released the straps at the bottom of the shaper. Then I raised it again just lifting the top. After it was up on the pedestal, it was not too hard to slide it around the garage floor. I started taking pictures of it. I wanted to remove some of the heavy crunchy grease and sludge before I moved

any of the slides. I didn't want to grind the sludge into the ways. Then I went back downstairs to wipe the sludge off and see what I have."

After a month and a half John reported back in to the group that his project was finished. He reported that the shaper runs great. He had to replace some fasteners including the square-headed gib screws which he replaced with allen-head set screws to give it a cleaner look and reduce the chance of a screw head tearing his body parts.

John reports that after adjusting the tension on the chain, he made a new jack shaft and bearing. The adjustment was done with two long setscrews that push the jack shaft forward or backward and apply tension to the chain as well as squaring the jack shaft to the machine. The set screws are in the casting of the machine. Now he says the drive is fairly quiet. He tried several lubes for the chain including bicycle and motorcycle chain lube then settled on LPS #3. This lube dries to a kind of waxy substance. LPS #3 is available from Home Depot:

www.lpslabs.com/Products/CorrosionInh/Lps3.asp

John replaced all the Gits oil cups. He installed new felt wipers and rewired, keeping the original motor and switch. Then he used Jasco paint stripper (available from Home Depot) which is very strong stuff:

http://www.jasco-help.com/products/prod_rem.htm

Next, John used a pressure washer and soap to neutralize the stripper. After stripping there was only one small area with original factory plastic filler that he reworked with filler. John left the rest as original because it was in good shape from the factory. The orange/red primer in the pictures is Frazee metal primer #661 which is recommended for their paint Aro-plate II. John says it is the best metal primer he has used. John had the paint computer color matched to a pristine section of the inside of the door:

<http://www.frazeepaint.com/flocations.html>



Base Before

Photo by John Rouche



Base Primed

Photo by John Rouche



Top Stripped

Photo by John Rouche



Top Before

Photo by John Rouche



Top Primed

Photo by John Rouche



Door Finished Photo by John Rouche

Thanks John, for that great story and sharing your successful rebuild.

Keep sending me email with questions and interesting shaper stories.

My email address is:

KayFisher@att.net

Kay

at Fred Eisner's used tool shop, in Yonkers, NY. Not everyone in the group owns a Logan lathe. Come to think of it, not everyone in the group lives in New Jersey. So, like NEMES, this is a diverse group.

Some of the recent activities of NJLLO include trips to used tool and hardware dealers, motivating a local community college to hold machining classes, and a private mailing list of very useful practical and technical articles. But like NEMES, the heart of NJLLO is not the activities - it's the members. Joe, for example, was a machinery sales rep for years and loves clockmaking. Ken is an ex-tool and cutter grinding shop owner and a wealth of knowledge on sharpening, among other things. As of last count, the NJLLO group had 78 members.

If you're interested in meeting some new people, you don't have to drive to New Jersey. Go to the internet, read their welcome statement, and sign up to join their discussion group on yahoo groups: http://groups.yahoo.com/group/NJ_LoganLatheOwners

It's a great group of people just like us-perhaps even nicer! :-)

Bob Neidorff



In the News

We've got a friend in - New Jersey!

NEMES is a group started by a few energetic people, including our first leader, Ron Ginger. With their enthusiasm and efforts, we got connected with the Charles River Museum of Industry, got our own library, a monthly newsletter, monthly meetings with guest speakers, an annual show, and much more.

I'm very pleased to announce that there is a similar club starting in New Jersey, thanks to the efforts of another small group of people, led by Joe Schulte. Dave Bono, Errol Groff, and I were delighted to attend a recent meeting of the *New Jersey Logan Lathe Owner's Group*

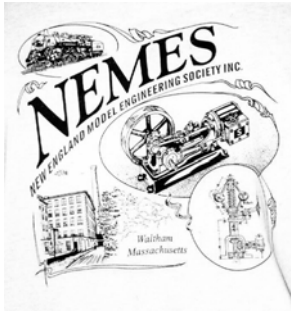


For Sale

Shaper Work CD

Put out in 1944 by the New York State education Department this 326 page manual is chock full of valuable tips and information on using the King of Machine tools....The Shaper. Covered is everything you need to know about the care and feeding of the shaper, use of the shaper, even how to sharpen tools for the shaper. Scanned and saved in Adobe Acrobat format. \$5.00 shipping included.

Errol Groff
180 Middle Road
Preston, CT 06365 8206
errol.groff@snet.net



NEMES clothing

NEMES Tee Shirts

NEMES tee-shirts and sweatshirts are available in sizes from S to XXXL. The tee shirts are gray, short sleeve shirt, Hanes 50-50. You won't shrink this shirt! The sweatshirts are the same color, but long sleeve and a crew neck. Also 50-50, but these are by Lee. The sweatshirts are very comfortable!

Artwork by Richard Sabol, printed on front and back:



Rear



Front

Prices:

	Tee Shirts	Sweat Shirts
S - L	\$12.00	\$22.00
XXL	\$14.00	\$24.00
XXXL	\$15.00	\$25.00

Add \$5 shipping and handling for the first tee shirt, \$1 for each additional shirt shipped to the same address. Sweatshirts are \$7 for shipping the first, and \$1.50 for each additional sweat shirt.

Profits go to the club treasury.

Mike Boucher
10 May's Field Rd
Lunenburg, MA 01462-1263
mbouch@hotmail.com

NEMES Shop Apron



Look your best in the shop! The NEMES shop apron keeps clothes clean while holding essential measuring tools in the front pockets. The custom strap design keeps weight off your neck and easily ties at the side. The apron is washable blue denim with an embroidered NEMES logo on top pocket.

Contact Rollie Gaucher 508-885-2277



**MARK
THIS
DATE**

Upcoming Events

Bill Brackett

To add an event, please send a brief description, time, place and a contact person to call for further information to Bill Brackett at wbracket@rcn.com or (508) 393-6290.

Thanks to Richard Sabol for his list of engine shows.

May 1st NHPOTP engine show
RT 113 Dunstable MA
Robt Wilkie 207-748-1092

May 5th Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410

May 15th MIT Flea Market
Albany Street Garage, Cambridge MA

May 21st 9:00AM-2:00PM
Jim Paquette's open house
114 High St. Uxbridge MA 508-278-2203
See page 4 of this newsletter for directions.

May 24th-26th EASTEC
Eastern States Exposition
W Springfield, MA <http://www.sme.org/eastec>

May 28-29 Bernardston Show
Rt 10 off Rt 91 Bernardston, MA
Vickie Ovitt 413-648-5215

May 28th American Precision Museum opens
Windsor Vt <http://www.americanprecision.org/>

May 29th Owls Head Transportation Museum
Fiddleheads Antique Car Festival & Antique
Aeroplane Show

June 2nd Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410

June 4th-5th Cranberry Flywheelers Meet
Edaville RXR Carver MA
David Moore 508-697-5445

June 4th-5th Dearborn Homestead Show
Campton, NH Dave Dearborn 603-726-3257

June 11th-12th Hinsdale Show
RT 119, Hinsdale NH
Douglas Wood 802-254-6758

June 11th-12th Skowhegan Show
Skowhegan Fairgrounds
Skowhegan ME.
Joe Kelley 207-862-2074

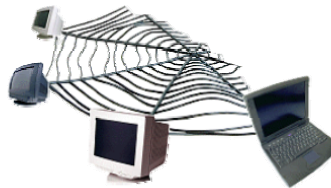
June 12th Owls Head Transportation Museum
Rods, Customs, Muscle Cars & Antique Aeroplane
Show

June 19th MIT Flea Market
Albany Street Garage, Cambridge MA

June 25th-26th Orange Show
Orange Airport Orange MA
Clark Labbe 978-774-1488

June 26th Owls Head Transportation Museum
Ford Festival and Antique Aeroplane Show

Bill



Web Sites of Interest

Sign up for the NEMES mailing list at:
<http://groups.yahoo.com/group/nemes>

Read a good article with excellent photos about
some wonderful, commercially-produced quarter
scale engine models at:
<http://www.airbum.com/NeatShtpix/NeatShtOX-5.html>
The engine model manufacturer's website is:
<http://www.replicaengines.com>