

The
NEMES
NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

Gazette

No 293

November 2020

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November Meeting

Due to the coronavirus pandemic, the November meeting will be held on line. The meeting will be on November 5, at 7PM.

For details of how to get the on-line meeting, please see Dan's President's message.

Contents

Date/Time of Sept Zoom Meeting	1
Club Business	2
Zoom Meeting details	2
President's Corner	3
From the Editor's Desk	4
Nonexistent Future Events	4
Used equipment for sale	4
Charles River Museum Capital Fund	5
Reports from the Sandy Hill Locomotive Works	5
Adventures in home repair	13



Club Business

Rich Baker

DUES: We will start collecting the 2021 NEMES Dues this month. Because we are not meeting in person, we will send out invoices from our Square Credit Card processor later this month. This will have a link to pay online directly to Square. If you want to pay by check, please mail the \$25 check to NEMES, 288 Middle Street, West Newbury, MA 01985. Thank you for your continued support for NEMES.

APPAREL: While paying for dues, please check out the NEMES Aprons, T-Shirts, Denim Shirts and Sweat Shirts. We are happy to ship any of this clothing directly to your home.

Meeting Announcement

All NEMES Members

I hope you can join us for an on-line NEMES meeting on Thursday, November 5th.

We will be joined by Steve Tallings and fellow members of the *Chesapeake Area Metalworking Society* (<http://www.cams-club.org/>)

Topics for the Meeting:

- Introductions
- Club Business
- Show and Tell
- General discussion

The link below leads to a couple of short tutorials about how to join a Zoom meeting.

<https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-meeting>

And here is the zoom invitation. See you there!

Daniel Eyring is inviting you to a scheduled Zoom meeting.

Topic: November 2020 Zoom Meeting
Time: Nov 5, 2020 07:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://zoom.us/j/6229563584?pwd=eHVmSmdBWF5ZDRQUVZBWHZJV0NtZz09>

Meeting ID: 622 956 3584

Passcode: 072169

One tap mobile

+13126266799,,6229563584#,,,,,0#,,072169# US
(Chicago)

+19292056099,,6229563584#,,,,,0#,,072169# US
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+1 312 626 6799 US (Chicago)

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+1 301 715 8592 US (Germantown)

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

Meeting ID: 622 956 3584

Passcode: 072169

Find your local number:

<https://zoom.us/j/6229563584>

President's Corner

Dan Eyring



In our last meeting, Rich Baker and I proposed that NEMES contract with an administrative services firm to take some of load of managing NEMES off of club officers. The general consensus was that the proposal be put to the NEMES membership at large for approval or rejection.

Following that direction, Rich and I generated a survey and had it emailed to the NEMES membership. The survey asked two questions:

1) CONTRACTING FOR PROFESSIONAL ADMINISTRATIVE SERVICES

Because of the burden on NEMES Officers of maintaining the necessary NEMES Club administrative functions, a professional services contractor was asked to provide a quote for the following services:

- Distribution of the monthly NEMES Gazette in both email AND hard copy format to all members.
- Sending out reminders for membership renewal and collection of dues.
- Preparation and filing of financial statements for yearly audits and tax returns as well as submission of Massachusetts Corporation annual filings

The services contractor, Capitol Hill Management Services, Inc. quoted a fee of \$150 per month (\$1800 annually) for the above services. The NEMES treasury currently has sufficient funds (\$10,000) to sustain the cost of proposed services cost for five years. If all our 140 current members keep paying their dues, \$3500 new funds will be received annually. This is sufficient to cover expenses for the annual Model Engineering Show and the cost of professionally provided services.

Do you approve of NEMES contracting with Capitol Management Services, Inc. to provide the administrative

services detailed above to ease the work of running NEMES?

2) SERVING AS A NEMES OFFICER

Although it is difficult to find members willing to serve as Club Officers because they may perceive that such an obligation will take up more of their time and energy than they wish to commit to, the burden of being a Club Officer would be greatly reduced by contracting for professional services and by the ease of conducting monthly meetings on-line – as we have since June.

Are you willing to serve as a NEMES Club Officer in the future?

We received 35 responses to the survey, a result that Rich says is typical in the survey business. Of those 35 responses, for each question we received 28 “yes’s” and 7 “no’s”.

Guided by the response to Question 1, Rich and I signed the contract with Capitol Hill Management Services, Inc. (CHMS) on October 22. We are shooting for a January 2021 start of services, but there is a lot of work to kick things off, so it may be later.

The main benefits to the NEMES membership of contracting with CHMS are to guarantee the delivery of the Gazette via both email and USPS mail, to make payment of annual dues easier, and to ease the burdens of office for those who volunteer in the future to be NEMES officers.

[Ed note, I assume that the second question the results are reversed, as we had only 7 people willing to serve]. On that note, I wish to thank those members who said they WOULD be willing to stand for election as NEMES officers:

- Victor Kozakiewicz
- Richard and David Baker
- Me
- Robin Parker
- Robert Timmerman
- Robert Goeller

I don't know when we will hold the next club elections, I assume we will discuss that at upcoming meetings.

Dan Eyring



From the
Editor's Desk

Bob
Timmerman

The Gazette is always looking for articles on your shop projects

Dick is writing the articles for his family and friends, and sometimes puts in personal details. While I edit out some of them, I have been leaving some of the details in, as I would hope that NEMES members would like to read about what fellow members are up to.

This Gazette is coming out a little earlier than the past several ones. I hope to get them out 10 days or so before the meeting, to give people a bit more time.

Future Events

Pretty much everything has been shut down because of coronavirus. If anybody has information on a meet, please send it to me, and I will publish it.

USED EQUIPMENT FOR SALE

Sale of Pictureframe Products, Inc.

I am writing about a business opportunity for a person who is a 'maker' of things. I am approaching the Charles River Museum of Industry & Innovation [and NEMES] as I know your followers are makers and this would be a very good match for someone associated with it. Bob Jolkovski, developer of shrink wrapping for the art market over 40 years ago, is seeking a buyer for his small, but viable, company located in Arlington, Massachusetts. Bob is now 91 years old and wanting to sell the company. The company's name is Pictureframe Products, Inc. After moving from Dorchester to Arlington, MA, in 2013, the company dropped many of its product lines and kept the most viable: shrink wrappers and the film used to protect and display art work. The products are sold through Blick Art Materials and we are represented on their website as Mountex Shrink Wrappers, Handi-Seal, Mountex Archival Shrink Film and Archival Shrink Bags. The wrappers are manufactured here in Arlington, and the film is rewound and sent to Blick from our converters. The company is profitable, but small. However, small is a good thing for the right person. They could make the products at home or as part of a larger company or shop where they could cordon off a section for parts and make and package the wrappers on a table with minimal tooling. We also have a small Rongfu milling machine where the parts could be made. Because of Bob's physical limitations, he has meted out some of that work making parts more expensive than they need be. The milling machine, or mill drill, as it is some times called, has been deemed in excellent condition by the Charles River Museum. We are not asking much for the company and terms can be flexible and creative. Rather we are looking for a good match for someone to carry the company into its next phase. It needs new energy and we are hoping someone associated with the Charles River Museum [or NEMES] might feel the same.

Any questions, call Adrienne at 339-368-0315
October 2020

Charles River Museum Capital Fund Raising Campaign

With the onset of the pandemic, the CRMII has been forced to close indefinitely. As a consequence, the Museum has lost its major income stream, namely the fifty or so weddings a year held in the Museum. Other events, such as the Wine and Food Festival and the NEMES February Model Engineering Show were also cancelled or postponed until they can be held safely.

Realizing that the Museum has been too dependent on Museum events for its funding, the Director and the Board have commenced a campaign to solicit local corporations for sponsorship and long-term funding, so as to put the Museum on a firm financial footing in the future.

If, as a NEMES member, you know of a New England corporate entity that might be interested in sponsoring the CRMII, please contact me deyring2017@outlook.com or the fund raising lead, Rudy Ruggles rudyruggles3@gmail.com

If you want to know more yourself about the CRMII or tell someone else about it, we are posting a document, "CRMII – An Introduction" on the NEMES website www.neme-s.org

Thanks in advance for your help!
Dan Eyring
CRMII Board Member

Reports from the Sandy Hill Locomotive Works

This is Dick Boucher's original introduction, and I am reprinting it here, as I think it is still relevant.

June 7, 2020

Hello fellow live steam model hobbyist and principals of the New England Model Engineering Society,

James (grandson), Norm, Jay and John. This is my usual Sunday afternoon progress report on work

here in the Sandy Hill Locomotive works. Dan, Rich, Bob and James Scheffler I am sending this along to you thinking it might be a way to get some interest back in the club if the fellows who have given up traveling to Waltham had a place to post pictures of their work and view other builders projects. To the new fellows on the list I am working on Cole's Models 2"scale Case steam tractor. For some time now I have been sending out pictures and a short description of the progress on the project to the first three listed having added John lately. Back in the early days of the Live Steam railroad hobby there were only a couple "meets" a year some as far away as Montreal Canada and Carl Purington started the "Traveling Locomotive Books" in which a hobbyist would attach a couple pictures of his work and forward the book to the next person on the list. Fortunately these books still exist and are repositioried at John K's museum in Beverly. At any rate my thought is we set up a formal place in our web site or someplace to create the "Traveling Hobby Machining Books" Your thoughts.

All for now, stay cool and stay healthy,

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

Recent work

October 20

G'day,
Well I am not down under not even under the weather but I could use a rainy day, Another great week of yard work lots of progress for Bea and I. the weather has been just perfect for that activity. As the cool days approach I am reminded that the yard work is just beginning with the leaves just starting to turn color in preparation of falling off the trees and filling my yard. Looks like unless it snows early there is a lot of yard work to do in the future. It may look like very little progress has been made on the "dickens" locomotives this week but a lot of time has been spent polishing the little boilers between silver soldering operations. Photo 1 shows the setup for putting the holes in the boiler shell to accept the small bushings for the smoke stack (aka, the safety valve) and the steam dome for the down pipes to the cylinders. This was kind of what we used to refer to

at work as pucker work, being so gentle with the end mill as it cut through a curved surface



Photo 1

Photo 2 is silver soldering the small bushings into the boiler barrel. This was kind of tricky because the bushings each stood proud of the barrel by a different dimension. If you look carefully at the picture you will see the 1/16 wires I supported the boiler on on the firebrick. I pushed the bushing down tight on the brick with the wires giving the proper spacing. It work very well. You can also see my third hand stabilizing the boiler as I silver soldered from the inside. The other bushing required 1/8 wires in the same setup.

I wondered and proved that CLR [Ed. Note: CLR is a trademark, Calcium, Lime, and Rust Remover] is an effective pickle for cleaning brass after silver soldering. Photo 3 shows a rather messy looking boiler in a beaker of CLR with a cleaned and polished boiler next to the beaker.



Photo 3

My large pickle bath that I use for large copper boilers will leave a copper residue on any brass parts I try to pickle in there. Well it is early on a Sunday evening so I will close this report and start cleaning up the second boiler for a little while, meanwhile stay safe, stay healthy and stay sane.

Oh yeah, we went over to Bea's sister's house yesterday and while Bea picked apples with her sisters I had a cup of coffee and a small engine show on the outside tables at Dunkin with Norm Jones.

Additional: There is apple pie, ice cream and sharp cheddar cheese waiting for me when I close shop and head upstairs this evening. (I might not get a lot of polishing dome)

Dick B.

Richard L. Boucher

Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

September 27

Hi All,

As I was preparing to set this week's notes to the Internet I got the October issue of the NEMES Gazette. Man is time flying. Well I did get a lot accomplished in the shop this week even though it wasn't all modeling. Photo 1 shows the setup for hydro testing the boilers for the "dickens" engines.

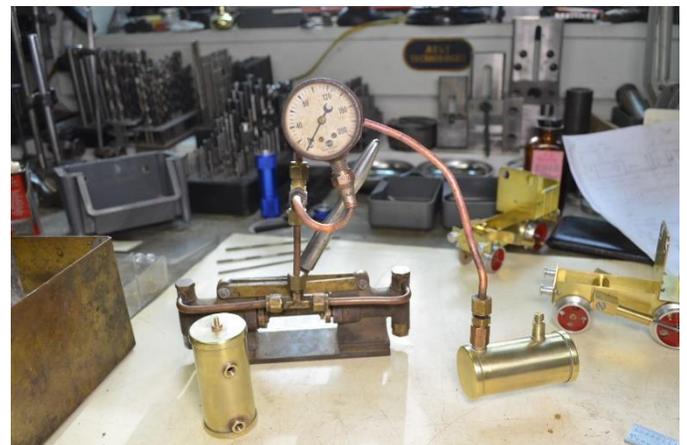


Photo 1

One had a slight weep around the smokestack, safety valve bushing which was quickly re-silver soldered and both have held an 80 psi quick surge bring a bit more stable around 40 psi. The pump is my locomotive hand pump and it is in need of a bit

of maintenance itself. At any rate the boilers are done and tested ready for the fittings on the bushes which I think I said I would be working on a couple weeks ago.

Life happens while you plan other things.

Just in case you fellows think my shop is always neat and orderly check out Photo 2. I guess I need to have a shop tour so I can get motivated to really clean up around here. It has been a week of deferred maintenance in the shop.



Photo 2

Photo 3 shows the new hinges on the guard for the belt on my horizontal cutoff saw. All I had to do was say I am going to do that and it happened. Now things are safe around the saw.



Photo 3

Photo 4 is a repair I have meant to get to since I got my surface grinder many, many years ago. It is the Bijur automatic oil pump for the ways of the grinder. The end of the armature shaft had worn down and the bearing had gone egg shape also. The fix was to turn the armature shaft down to clean it up and to

bush the bronze bearing with a piece of oilite. This being done the 220 volt motor runs quite nicely on 110 volts and should work quite fine when installed back on the machine and running at 220 volts.



Photo 4

Photo 5 shows the actual pump all cleaned up and painted a nice black color like Bijur painted them



Photo 5

The paint was still wet when I took the picture this afternoon thus the masking is still in place. I think the machine must have been in a school environment at one time, it is covered in very heavy green paint which had no prep at all before application and comes off quite nicely with a bit of scraping.

Well that is it for another week, as always stay safe stay healthy and stay sane.

Dick B.

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

October 4

Hi Gang,

Photo 1 shows the automatic oiler reinstalled on the Boyer Schultz surface grinder and all indications are it is working fine.



Photo 1

Photo 2 shows a weeks' worth of little bits that finish off the attachments for the boiler;



Photo 2

everything in the picture is times two as seen attached to boiler on the right side of the picture. Basically all that has to be done now is the pipes connection the steam dome to the cylinders, a piece of cake.(I hope) Photo 3 shows the trimming of one of the fuel tank sides to the proper length. Much easier to do it this way than to try to do the bend allowance to get it to come out to a close dimension this way I hit the dimension minus .002.

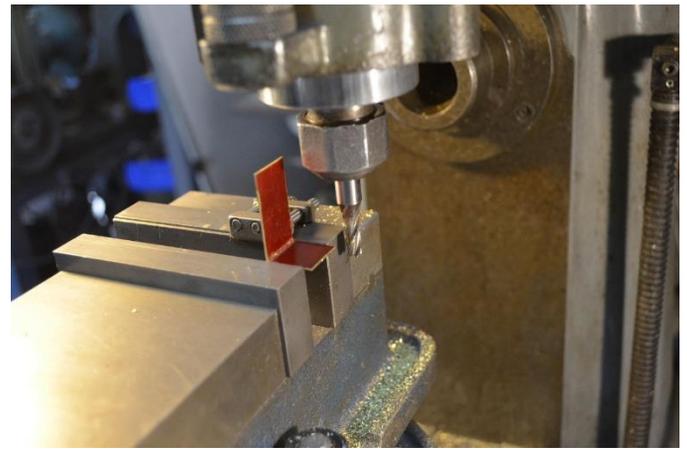


Photo 3

Photo 4 is the progress on the tanks to date with the bottom on one of the tanks and the stock laid out for the top and bottom of the other tank.



Photo 4

The tubing in the picture is for the burners, connecting tube and filler tube. Hopefully that is just a couple more days along with the steam lines and them a test run.

I have been contemplating my next project here in the shop and have a couple things in mind but I will keep you all in the dark along with me until the decision is made.

For those who missed the October meeting on zoom Ric Hahn showed us his "dickens" that he had made many years ago. I guess all my polishing will go bye bye when I fire the engine cause Ric's sure had a nice patina on it.

So as always. stay safe, stay healthy and stay sane. and go out to the shop and make some shavings or chips whatever moves you

Dick B.

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

October 11

Hi Gang,
Photo 1 is my small welding hearth on the workbench for silver soldering the steam lines together just a couple firebricks.



Photo 1

Well ounce for pound not much has been accomplished at the shop this week weight wise but all the small pieces in Photo 2 for the two burners had to be machined to size some holes drilled in them on location and of course deburred the photo also includes some of the fabrication of the steam lines from the boiler to the cylinders along with the spring tubing bender and the forming block I made to bend the tube over. I did anneal the K&S brass tubes by heating cherry red and then quenching in water before bending them.



Photo 2

Boy is that ever a pain. Photo 3 shows how I am going to be able to silver solder the top on the fuel tank on the little burners.



Photo 3

I have drilled holes through the sides and put in brass rods to support the cover at the correct height for the soldering job. The ends of the rods will be soldered over and filed flush and they will be left in the fuel tank. Photo 4 is my DHC 2000 torch from Detroit Torch. I picked it up at Cabin fever a number of years ago and am actually getting almost as good operating it as the fellow who did the demonstrations at the show.



Photo 4

The nice thing about the torch is it runs at 5 PSI acetylene and 5PSI oxygen with a very hot but gentle flame which doesn't blow the small parts to be silver soldered all over the place.

Well this job is getting close to completion hopefully in the next week. I must admit it has taken me a lot longer than I thought it would to finish this project I started in 1976 or thereabouts.

Dick B.

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

October 18

Hi Gang,

Well it actually isn't October 18th as I write it is actually Thursday evening October 22nd. Seem as though I overdid myself with physical activity late last week and have spent the week kind of exhausted. It all started with deciding to rearrange storage things in the shop and I got carried away with it.

Sunday afternoon I was at grandson James shop helping him get a handle on organization there. Ha, me in charge of organization, oh well we did manage to get things into a sort of order. From now on I will refer to grandson James as James B.

Back to the "dickens" locomotives. Last week I showed a setup for silver soldering the steam pipes from the steam dome to the cylinders Photo 1.



Photo 1

Well this system just produced a lot of junk Photo 2.



Photo 2

Now let me tell you these minor details of non-machining gave me the most difficulty of the entire build. So, a couple nights sleeping on the problem and I remembered a small fixture I had used in the model ship building room, Photos 3,



Photo 3

Photos 4 and 5.

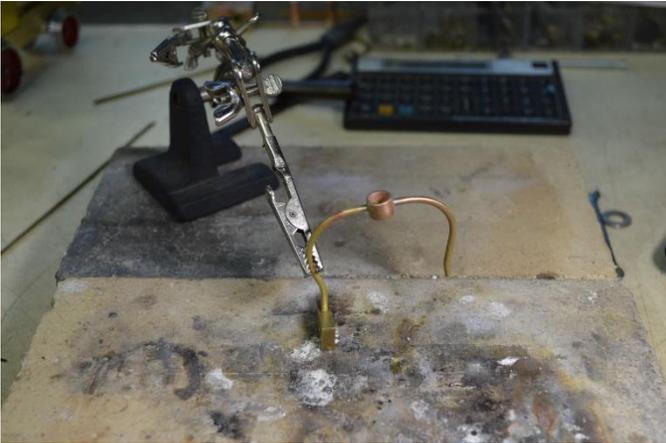


Photo 4



Photo 5

So now it is on to success. The burners were finished and after a test firing Photo 6 and a bit of wick trimming the burner was installed in the first locomotive shown finished except for the stainless ball and spring in the safety valve smoke stack, Photo 7



Photo 6



Photo 7

Now to finish the second engine this week and test fire them and see just how well they run all the while considering what will be the next project I finish.

Dick B

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

October 25
Hi Gang,

Well, Photo 1 (FANFARE !!!!!) the "dickens" locomotives are done, finished, fini, etc.



Photo 1

Actually not totally I am still looking for stainless steel spring wire for the safety valves. But after what I have been through with the steam pipes that will be

a walk in the park to make the springs. So in the meantime they go on the shelf with the other completed projects as I contemplate what started project I will finish next. I find it hard to believe how long it took to finish the simple little locomotives but that goes to show why I never made the annalist job at work.

So other than that this week I made a "Tee" slot nut for James B's new mill to hold the vise down. First Photo 2 a little shaper work



Photo 2

then Photo 3 some milling machine work



Photo 3

next (no photo, a stint in the drill press and a go with the M 10 tap and you have the finished "Tee" slot nut on the right hand side of Photo 4.



Photo 4

Next time I go to James B's shop I will see if I can find the studs that came with the hold own straps and step block that we didn't get when we picked up the mill. If we have no luck with that I will finish the rest of the nuts with a 3/8-16 thread and make some studs and nuts. I also replaced the bearing inside an idler pulley on the leaf vacuum lawn tractor deck. Son Peter came over and helped me get the mower deck back under the tractor and this morning I tried the machine out picking up leaves in the yard and as long as I keep ahead of the leaves the machine works good.

So there you have it tomorrow I will look at unfinished projects in the shop and run the mower around the yard a bit and check out what unfinished project I will give a start to finishing. Wait, did I mention I will be trying to decide what unfinished project I will work on next, oh, I guess I did, you will have to forgive me I am a bit giddy from finishing the "dickens" locomotives.

Dick B,

Richard L. Boucher
Chief Engineer/Master Mechanic/ Lead Machinist
Sandy Hill Locomotive Works

Adventures in home repair

Bob Timmerman

What about home repair could interest a machinist or modelmaker. Well, one runs into some interesting situations, and some interesting modern devices. In this case, it was a toilet seat.

First problem in replacing a toilet seat is getting the old one off. The old seat used metallic bolts and nuts, and they had rusted. The only way to get them off was the hacksaw. You are working in tight quarters here, and need a hacksaw where the blade is at right angles to the frame. This is a problem, because the modern high blade tension hacksaw frames will only hold the blade parallel to the frame, or at 45 degrees to the frame. 90 degrees, you are out of luck. Fortunately, when I buy new tools, I keep the old ones, and still have my 50 or 60 year old Millers Falls traditional hacksaw frame. It does not tension the blade as well as my new ones, but it allows turning the blade to 90 degrees to the frame. With a bit of work, the old seat was off.

Installation of the new seat was the interesting part. As we all know, proper bolt tension is important, especially since the seat would be bearing against a brittle porcelain toilet. It should be tight enough so that it does not move, but not so tight to damage the porcelain. Some means of measuring the bolt tension is necessary which is foolproof, and inexpensive enough to use with something sold at a big box store for 20 bucks.

The designer of this seat borrowed a technique from the structural steel industry, shear off bolts. Proper bolt tension is necessary for bolts holding structural steel together, and one approach is to use a bolt with a spline at the end of the threads. A special wrench turns the nut, and turns the spline in the opposite direction. When the correct torque is reached, the spline shears off.

This toilet seat, which sold for 20 bucks at the orange big box store, used the same basic technology. The carriage bolts which held the seat on were held at the head end by a square washer with a square hole to take the square shank at the top of the carriage bolt. The nut was plastic, it looked like polyethylene. Right away this solves another problem, it will not rust on. The nut is rather long, about 1 1/2" long and is hexagonal in cross section, so you can get a wrench on it.

There is a plastic washer that cushions the top, so the porcelain is clamped between two resilient surfaces. Here is the clever part. The bottom third of the nut is designed to break off when the desired torque is reached. You cannot over torque the bolt during assembly, but there is still a surface where you can grip for disassembly. This was clever engineering on something designed for the mass market.