QUINEBAUG VALLEY ENGINEERS

Zagray Farm Museum

The Zagray Quarterly

September 2018

PRESIDENT'S NOTES – GEORGE LEHR

This summer has borne sad news for the QVEA. We lost two longtime members, George Judkins (QVEA Director) and Ed Bezanson (Vice President). They were dear friends and will really be missed. They were great assets to the organization. We are diminished.

Aside from the bad news, our July show was one of the best ever. The show on Sunday featured the first Antique tractor pull at the farm and was quite enjoyable. The new pit was relatively soft but that should change with age and pulling at the October show should be better. It would be nice to bring back the garden tractor pulls and make use of the pulling pit at the show on Saturday.

We received some nice donations, including a Farmall Cub, a large air compressor, a vintage Lincoln welder, a bench grinder, a vintage Midland "Dandy Boy Super" garden tractor, a fertilizer spreader, and a mowing deck for a Farmall Cub. We also received a nice running 1967 Mack tractor from the New England Air Museum and a good running Ford pickup from Connor Bishop.

October meeting elections will be held to fill the director position vacancies created by Bob Chester's resignation and George Judkins' passing. There are two nominees; Allen Alonzo and Rick Clewell.

Site work has finally begun for the new big (museum) building! Work has also been started to dig out the pond! These are things that we've talked about and wanted to do for years. The work accomplished this past Labor Day weekend demonstrated how rapidly QVEA teamwork can bring about change. A lot more needs to be done and it's going to be pretty busy at the farm from now on. Hope to see you at the October show.

ENGINE BUILDING – CONNOR BISHOP

This summer has seen lots of work in the engine building. Of course, our largest and most exciting achievement is getting the Fairbanks Morse running just in time for the Summer Show. More work is needed to complete the project, however. We will be installing safety railings around the flywheel and generator end, and the cooling system needs to be completed. We recently received a donation of a large tube-and-shell heat exchanger that hopefully will be the replacement for our leaky original, and the circulating water will greatly increase our run times.

We spent some time adjusting the valves on the Atlas Imperial diesel, and then moved onto the fuel system to adjust the injectors because the fuel system needs to be pressurized to adjust each injector pushrod properly. In addition to two injection pump plungers driven by the engine, there also is a hand-operated pump to manually build pressure. However, while we were able to pump fuel through the fuel rail, it would not build any pressure. We suspect leaking seats in the check valves, so more diagnosing will need to be done to pinpoint the problem. Since we had issues with the fuel system, we decided to move onto the air start system and verify its operation. The air start system works by cam-operated valves delivering air into the cylinder via an air manifold. However, we had an issue with air being delivered to cylinder #1 regardless of whether the valve was open or not. We suspect damage to the cylinder head such that air from its passage can bypass the valve and flow directly into the cylinder. Unfortunately, the cylinder head will have to be removed to diagnose and remedy this problem.

The Wichmann semi-diesel is on new skids, in place, and plumbed up to fuel and air. We still need to decide how we want the cooling system to be plumbed, but this engine may be running for the Fall show!

I put our two small steam engines, a horizontal Lively and vertical ABC (American Blower Co.) on oak skids for display, with the intent to eventually run these engines on compressed air.

During our Summer show, Nate was able to finish the sprocket swap on our Terex dozer and test it out in the sandpit. Unfortunately, after a couple minutes it started burning antifreeze so it was shut off. After removing the heads, it was found that both heads had cracks that extended into the cooling passages. We suspect that the cracks had been there for quite some time due to their size. The heads are now out for repair and should be back on the machine soon.

I received a quote for rebuilding the brake calipers on the Clark forklift, so hopefully those can be removed and send off soon for repair.

We have started doing a fair amount of tree cutting, and more work is planned soon. Currently some trees have been removed by the pond, and I have started clearing out an area on the road to the north field to use as a storage area for our donations that are starting to pile up near the engine building. There are also some trees by the house, machine shop, and around the sand pit that should come down. Anyone interested in helping with felling, chipping and taking the firewood is welcome to stop by. Keep an ear out for work party announcements in the coming weeks.

Many tasks were accomplished, and we have plenty more to do! We're always happy to see new faces on our working weekends, so if there are any projects that strike your interest stop by and lend a hand!

BELT DRIVE TROUBLE -- BY DAVE MCCLARY

Early this season the belt drive system in the machine shop was working smoothly, demonstrating the way power was transmitted from a single source, in this case a motor, to conveniently located factory machines. Suddenly during Saturday of the July show there was a very **LOUD** chattering noise coming from the countershaft for the iron planer. It seemed to be coming from the clutch used to start and stop the planer. This clutch is fairly unique and its operation is not easily envisioned from its outward appearance. It can be described as one pulley inside and concentric with another, the outer pulley being driven by the belt from the line shaft. This outer pulley is free to rotate on a sleeve fastened to the countershaft which holds the plain pulley that drives the planer. The inner pulley is secured to the countershaft by two set screws, one of which was later

found to be loose. These set screws go through holes in the sleeve so they act directly on the shaft. There is a small clearance between the inner pulley face and the inside of the outer pulley rim. The inner pulley has two spokes and the rim is cut transversely adjacent to each spoke. The effect is that each half of the rim is supported at one point only and the remaining section of the rim is free to flex outward from that point of attachment near the spoke. Adjacent to the inner pulley is a conically shaped cam that is free to rotate and slide on the countershaft. There are two arms attached loosely to the two pulley spokes with the ends riding on the cam. The wooden shifter slides the cam towards the pulley forcing the two arms outward causing the flexible sections of the pulley rim out into contact with the outer pulley rim, creating friction much like an automotive drum brake, turning the inner pulley and countershaft. The chattering noise shut down planer operation for the remainder of the show. The following weekend the clutch was partially disassembled for inspection. The two pulley friction surfaces were sanded lightly to ensure no foreign material was present and the pulley was reassembled. A trial run resulted in the belt from the line shaft immediately flying off. Some realignment of the belt and a belt guide resulted in the belt running smoothly in the center of the two pulleys. The planer was started and it ran smoothly as well, ready for the fall show.

Separate item:

For Sale; 2012 GMC Canyon extended cab pickup truck with Leer cap. 4WD, 3.7 liter five cylinder engine, 4spd automatic. Excellent condition, 25,000 miles. Asking $18,500. Call Dave 860-779-8718.

FROM THE DESK OF THE TREASURER – Art Chester

If you haven't paid your 2018 dues yet please take a moment to do so. If you are mailing it, make your $20 check payable to QVEA, and mail it to 180 South Plumb Road, Middletown, CT 06457. There's no need to fill out a new membership form, but if you have changes to your address, phone number or email, please include the changes. A stamped, self-addressed envelope is also welcome. Any and all donations beyond the dues are tax deductible and very much needed and appreciated!

If you have an email address, please email Dianne Tewksbury at dktewks@gmail.com to change from snail mail! That will save our printing-sorting-folding-mailing crew some labor, and save your club ***lots*** of money, as well as being environmentally 'green'.

For those of you who contribute to the United Way campaign, QVEA is now listed as a charitable organization allowing you to direct your donation to us for the support and expansion of the Zagray Farm Museum. The Pfizer Foundation also has a volunteer program that provides QVEA with substantial donations each year, based on the volunteer work of members who work or are retired from Pfizer.

We are set-up with Amazon Smile as well. This program donates ½ of 1 percent of eligible purchases to a charity of your choice. The pricing is the same on Amazon Smile as on Amazon. Paste or type this link https://smile.amazon.com/ch/06-1426891 into your browser to connect to QVEA's page and get started!

Museum Building

We got a verbal GO from the building department just before Labor Day Weekend. A long process complicated by our need to get a zoning variance for our shows. Ned gets a gold star for handling the permitting on this project!

Our portion of the project is mainly excavation and electrical. We cleared back the edge of the field and moved several items further back on the property and out of the way. Seems like we have done this a few times already! Labor Day weekend was a flurry of activity, to say the least! Sunday the guys pushed up the topsoil into a large pile, and Monday trenching commenced.

We will complete trenching for the main building the weekend of the 12th. Additional material will be needed for grading as the topsoil was thicker than anticipated.

We will send temporary power to the site via the existing pipes to both ends of the building for the contractor. Help is needed for all phases of our work here, from trucking away excess material, to grading, to electrical and piping work to make this project happen.

King Construction is tentatively scheduled for October 1st to begin erecting the building.

We are well on our way!

Pond Excavation

A project that has been on our list for many years is on the move. To transform this eyesore into a nice farm pond and dry hydrant will be an asset to the property. That it's happening at the same time as the museum building is unfortunate, but we need to move forward when the opportunity presents itself. As of a couple years ago, permits are not required for excavation of fire protection ponds by State legislation. Coupled with our acquisition of the property last year, and willing help, the project has started.

Stationary Engine Building

The Wichmann engine has been put on new oak skids, rolled under the roof and bolted down. The fuel system is in place, the air system and exhaust are designed and being built. The heat exchanger we were to use is damaged beyond repair, so if anyone knows of one (or several), let us know.

Saw Mill

The lumber storage area under the mill has been problematic and in need of an upgrade to better dry lumber and to address safety concerns. After the electrical and communication piping were installed, the opportunity presented itself as the area was cleared of lumber. Concrete was poured to give us a clean, dry and level area to stack lumber. The approach has been regraded to remove the double fall line that made forklift operators nervous moving long and heavy stacks of lumber. We intend to shift the road in front of the mill about 20 feet away to provide a better spectator and work area, and further lessen the grade to remove lumber. It's in progress.

Still wanted – Logs for the saw mill. Even though we received a substantial number of logs, we are still on the lookout for more. 16'6" pine logs in particular that are 20 inch diameter or more on the small end will make good rafters. 12'6" logs of similar size will be used for 2X4's and siding. We have a good supply, but having extra material in stock would be nice. Power has been installed to the woodworking building and the piping extended to the saw mill and tractor shed. We still need to install the wiring to the mill, and down to the tractor shed.

Pavilion Building

Our revised, revised septic plans were rejected by the State Health Department. The plan we submitted was on the recommendation of the State, so they rejected what they told us they would approve. We are thinking of splitting the septic and the Pavilion to get that through the town. That will allow concrete construction this fall.

NOTE FROM THE EDITOR & SECRETARY, DIANNE TEWKSBURY

Speaking of the Pavilion which will include a new kitchen – it's going to be large enough to have two grills rather than the one we have that gets over-crowded very quickly on busy show days. We will be able to serve more people and make a better profit for the club!! So, this means we are going to need more help!! We are going to need more volunteers to "cook" and help with the rest of the tasks that make it happen. If you've had any experience working on a flat top grill, your help would be immensely appreciated. Perhaps you or someone you know has experience cooking at events held by Fire Departments, Lions clubs, Fairgrounds, whatever, maybe you or they could help us out.

Some of the other tasks that make the whole operation work!

- Taking orders and handling money.
- Picking up plates of food from the grill area and delivering them to the pickup window ("runner").
- Making coffee, pouring coffee, retrieving water bottles and sodas from the cooler and delivering them to the customers. Actually, I'm thinking of having a separate window to handle just the beverages so people who are not ordering food, can quickly get their drinks. This will require another person to run that operation from taking the order and handling the money to getting and delivering their drink.

Please consider volunteering, even if it's just for a couple hours.

Ask family members and friends if they might be interested in joining in the fun!

This is Landon Chester, son of Dave Chester, getting checked out on one of the Zagray tractors, supervised by his Grandmother, Kathryn Chester. He loves getting his "tractor rides" at the farm and already knows all the levers by name. He'll be a Zagray Farm worker before we know it!

Dianne Tewksbury
QVEA Secretary & Editor
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Colchester, CT 06415

APPLICATION FOR MEMBERSHIP

QUINEBAUG VALLEY ENGINEERS ASSOCIATION, INC. (QVEA)

Zagray Farm Museum

NAME_____

STREET_____

CITY_____

STATE/ZIP_____

PHONE_____

E-MAIL_____

Dues are $20.00 per person for one year, payable with application.
Dues include liability insurance at the farm.

RETURN TO: QVEA, 180 SOUTH PLUMB RD, MIDDLETOWN, CT 06457