



The Line Shaft

The Official Newsletter of the

NORTH JERSEY ANTIQUE ENGINE & MACHINE CLUB

February 2016



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Founded on October 15th, 1979 by: Arthur Goble, Fred W. Westbrook, John Snook, Roy Bischoff & Lewis Quince



The January 14th meeting was held at the administration building with 27 members attending. AnneMarie was absent, so we dispensed with the treasury report. There was a lively discussion on some washing machines and (4) MAYTAG engines donated by Dan Wilson & Family. Blace Flatt, Bob Eckes, John Stickle, Chuck Klim, and Andy Mackey have all been involved and \$170.00 has been approved for the reconditioning of the MAYTAG engines. It is assumed that these washers and engines date from the late 1920's, maybe early 1930s. We will follow the reconditioning in future newsletters.

Dues collection was handled by Jeff Brooks and is well under way...keep the \$ coming!

The balance of the meeting consisted of an excellent maintenance and product presentation by LOCKTITE...see page (2) and (3) of the newsletter for the write-up and information on the presentation.

Another discussion topic at the January Meeting was the dismal response to our continued request for:

Someone to step up...and become an officer.

Please take a few moments and think about the club and what its meant to you in the past and perhaps it is time to give something back. Any questions or thoughts should be directed to: Dave Betts (973) 303-1994 or Chuck Klim (973) 948-0693 or any of the current board members, whose phone numbers are above.

The February 11th meeting will be held at the Administration Building, will start at 7PM, and will include a discussion by Andy Mackey on fluorescent rocks and minerals from the Sterling Hill Mine and Franklin Mine. There will also be a talk on radioactive materials in the home.



The presentation for the January meeting was arranged by Dave Betts and was a **Maintenance Workshop** provided by **Henkel/Locktite** and presented by *Louis Andreuzzi*, their *Adhesive and Sealant Specialist*. Louis started the meeting with the opening line “we are a lot more than the RED BOTTLE” and proceeded to give us an overview of Locktite and Henkel.

LOCTITE Threadlocker was invented in 1953 by Vernon Kreible in the basement of Trinity College in Hartford Ct. His company, *American Sealants*, retailed the product under the LOCTITE brand-name and in 1963 changed the companies name to *LOCTITE Corporation*. In 1992 they were purchased by the German Fortune 500 company *Henkel Corporation*...and reverted to a division and brand name.

LOCTITE is a “brand” of adhesives, sealants and surface treatments that include; anaerobic, acrylic, cyanoacrylate, epoxy, hot melt, silicone, urethane and UV/light curing technologies. Their products that relate to machinery reconditioning and that we would be most interested in include: threadlockers, thread

sealers, corrosion Freeze-and-Release, gasket and sealing products, bonding and retaining compounds, repair liquids, putty and paste fillers, lapping compounds, lubricants, and anti-seize. They’re product line is diverse and has come a long way from their pathfinding **Threadlocker!**

Louis’ discussion focused on providing a pro-active approach to repair and reconditioning procedures and the prevention of future or repetitive breakdowns and failures. The discussion centered around the top preventable downtime causes including: fastener loosening, keyway wallow, spun bearings, fretting-corrosion, tape (Teflon tape) fowled hydraulic valves, hydraulic leaks, air leaks, and gasket leakage.

The show and tell conversation now shifted into more of the technical aspects of the products and applications and focused on threadlockers, gasket & sealing products, bonding & retaining compounds, thread sealers, and corrosion Freeze-and-Release.

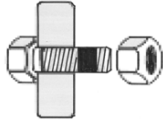
The first three are all anaerobic products, which include the threadlocking, bonding-retaining, and gasketing products, and act as lubricants during assembly, fill voids and maintain friction by adhesion. Bolts, nuts, and pipe connections have less than 15% metal-to-metal contact when assembled and bearing installs about 30% of contact when in a “highly machined” press fit...with the balance of the thread or bearing mount gap being “air-voids”. What we consider to be an excellent fit-up is actually quite poor. The job of the anaerobic material is to “fill” and “seal” these air filled voids; giving the assembled parts a perfect 100% fit-up, block moisture access, and create friction thru adhesion. They work well w/o a primer on ACTIVE SURFACES (able to be corroded) including: brass, copper, bronze, iron and soft steels. However, they “require” a primer if used on INACTIVE SURFACES including: aluminum, stainless steel, magnesium, zinc, black oxide, cadmium, nickel, titanium and some hardened steels. NOTE: several of the materials above are used as protective coatings on hardware, so...if in doubt or as a general rule...use PRIMER! As a bonus, the primer speeds the cure time.

The use of anaerobic and cyanoacrylate locking, sealing, gasketing, retaining and bonding product, plus some pretty slick computer controlled machine work, has increased mechanical reliability and allowed manufacturers to extend product warranties to lengths never allowed in the past!

THREADLOCKERS;

Most of us are familiar with their flagship product, high strength liquid **RED** Threadlocker...removable with heat

What Kreible had invented was an “anaerobic” adhesive...an adhesive substance that hardened in the absence of air and the presence of metal.



When an anaerobic adhesive is sealed between a nut and a bolt, air is excluded and it rapidly cures or hardens to form a tough strong bonding agent in the cavities created between the metallic treads.

Of interest, the bottle is part of the product in that it is porous and can “breathe” and allows the product to remain in the presence of air.

Transfer the liquid LOCTITE to another bottle and it will immediately begin to harden and you will have destroyed it’s shelf life.



(about 500+ degrees)...which performs well w/o the primer on a variety of metals and works on stainless steel and most plated fasteners. Louis passed around a sample of their general purpose semi-solid medium strength *BLUE 248 Threadlocker Stick*, which is applied much-like lip balm (to threads, not your mouth) and is excellent in hard to reach situations or as an upgrade replacement for Teflon tape or pipe dope-paste. The best part of the Blue product line is that it can be “removed with hand-tools” and also comes in liquid and tape forms...and is probably a better and more universal fit for most of the situations we find ourselves in. Their low strength PURPLE Threadlocker is pretty much for home use and not a machinery product. Louis also touched on their Blue and Green low and medium strength *WICKING* products. Their wicking products are excellent for strengthening the bond of pre-assembled fasteners, bearings etc. as the product is applied to the outside and is “drawn” into the joint thru capillary action. It is also excellent for sealing “porosity” in weld joints...a big one if the weld is sealing oil, fuel or pressurized air.

GASKET & SEALING:

The discussion now shifted to gaskets and in particular “formed-in-place” gaskets, with Louis’ statement that the old “cut-gasket” begins to fail within 10 months of installation, while the anaerobic liquid or semi-solid gasket materials, aided by great machine work, last almost indefinitely. Better machined surfaces and generally better fit-up of components and the use of “formed-in-place” gasket materials is the modern gasket/sealing method and, as mentioned on the previous page, has been a major factor in the present reliability of modern automobiles, trucks and equipment. LOCTITE makes a full line of products to be used as a replacement for or with cut-gaskets. The material comes in liquid and stick form.

BONDING & RETAINING:

For use in non-threaded situations, think bearing mounting and gear or pulley installation. They reduce fretting and can be used where the fit-up tolerance is poor (example, spun bearing replacement) with gaps up to 0.020 in. (0.5mm). They will return the mounting to 100% contact, seal the joint and sustain high loads without movement.

THREAD SEALING:

Their tread sealing products replace most of the tapes and pastes (think TEFLON) in pipe thread situations, are removable with hand tools and come in various strengths depending on the pressure to be sealed and temperature encountered. They work with oil, air and various fluids and specific products work with plastic, metal, aluminum and stainless piping. They also come in paste, stick and liquid forms.

FREEZE-AND-RELEASE:

The 3rd alternative in corrosion-stuck fastener removal...penetrating oil, heat and now cold. It should work particularly well in places where you can’t apply heat and on bolts in major castings, allowing you to spray and shock-freeze the bolt (to -45 degrees F) and creating a differential in the contraction rate (working the opposite of heat). It also has a penetrating oil component that will wick into the “cracked” corrosion joint between the threads.



During the 1970s,80s, and 90s Locktite owned Permatex. Sold in 1999, it is now a major competitor to Locktite, producing many similar products!

Please patronize the local businesses that contributed to our club this past year. They are all right here in Sussex County and live in the community.

Tire King

Charley and Dan Kuperus at Tire King in Sussex, offer fast, professional, friendly service at the lowest prices east of the Delaware. Mention that you own an Oliver, like Oliver's or have seen one recently and you are treated like family. Tire King is more than just tires and offers a full range of services for your car, truck or tractor. Phone: 973- 875-5950

Ideal Farms

We are so fortunate to have a local farm that grows the quality produce like Jan, Ben and Ben Jr. provide. They also offer a variety of jellies, honey and other delicious local made food items. Stop in and check their garden center. You have to try their "out of this world " homemade donuts made fresh every day. Phone: 973-579-3393

The Plaza Barber Shop

Lenny Vance has been clipping local residents for 50 years in the same old barbershop located in the lake Mohawk Plaza. He knows all the latest fads and styles at a price you will not believe...just like the stories he may regale you with. No fancy colognes, hairdryers or chrome barber chairs, just a professional haircut at a fair price. Walk in anytime or call 973-726-9311

Wilson Coal and Supplies

Stop in and visit with the Wilson family on Limecrest Road to see the variety of stoves they have installed along with all the supplies you will need to heat your home. Judy will be more than pleased to answer any questions you may have regarding a new installation or issues with your current heating system. Be sure and ask to meet the newest addition to the family, "COAL" the black Lab. Call 973-729-5555 if you have any stove related questions.

Augites Brooklyn Bagels

Augites ain't just the best bagels in Sussex County. Harry the baker bakes fantastic sweet rolls and pastries, along with old time crusty Italian bread and rolls. New York style sandwiches are their specialty. Call or stop in for catering or business delivery. Phone: 973-729-4100

Chatterbox

You don't have to travel to one of those new fancy expensive hamburger joints at the mall get a delicious hamburger. Great 1950's ambiance and friendly service with a menu that has entrée's to please everyone in your family. Did someone say Milkshake? Open 7 day a week. Phone: 973-300-2300

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