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Newsletter

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IN THIS ISSUE

Gordon has just recently returned from a holiday in Greece with Jan, his school teacher and history loving wife. He claims that if you have seen one pile of stones called a ruin then you have seen them all.

It's coming up to Christmas and it's a reasonable bet that a few others besides Gordy might be spending some time away from the shed on holidays.

Your project and your tools won't be pining away for your return but it is a risk that they could rust away without the constant application of elbow grease and cutting oil. We have some tips on how to preserve your tools.

Graham Moss wrote in asking about what is the best way to drain a compressor and so we have included our response within this newsletter for everyone to benefit by.

Last time we mentioned cutting speed as the most frequent question we are asked. The second most frequent is not too dissimilar… When is it necessary to use cutting oil when turning or milling?

Like many engineering questions, there are advocates for completely opposing views on the matter who can quote impressive stats to support their claims .

We have tried to present unbiased comments for both camps.

Read on…..

The ME Tap & Die Set Saga....

Has been settled at last. After almost 2 years of waiting , they have arrived from India and are perhaps the best carbon steel taps and dies we have seen. They are beautiful quality. ME Taps and dies as individual pieces are expensive - these sets are great value for money.

$192.50 for the complete set (2 boxes) incl GST

A man in a hot air balloon realized he was lost. He reduced altitude and spotted a man below. He descended a bit more and shouted, "Excuse me, can you help me? I promised a friend I would meet him half an hour ago, but I don't know where I am."
The man below replied, "You are in a hot air balloon hovering approximately 30 feet above the ground. You are between 40 and 42 degrees north latitude and between 58 and 60 degrees west longitude."
"You must be an engineer," said the balloonist.
"I am," replied the man, "but how did you know?"
"Well," answered the balloonist, "everything you told me is technically correct, but I have no idea what to make of your information, and the fact is I am still lost."
The man below responded, "You must be a manager."
"I am," replied the balloonist, "how did you know?"
"Well," said the man, "you don't know where you are or where you are going. You made a promise which you have no idea how to keep, and you expect me to solve your problem. The fact is you are in exactly the same position you were before we met, but now, somehow, it's my fault."

Why Draining an Air Compressor is Important

Compressed air systems create condensation that accumulates in the tank. The amount of condensation depends on how long you've been running the compressor and the humidity of the air. This condensation often contains water, dirt, lubricating oil and other substances. If you don't drain your tank, this accumulation will ultimately corrode (rust) the inside of your tank, weakening the tank walls until it ruptures. Be sure to drain your tank after every use.

How to Drain an Air Compressor

Properly draining your compressor is very simple. These steps are not meant to replace your owners manual.

Step 1: Turn off your air compressor and unplug it.

Step 2: Turn the regulator knob counterclockwise to set the outlet pressure to zero.

Step 3: Disconnect any air tools or accessories.

Step 4: Prop up one side of your compressor so that the drain valve is the lowest point. Setup some kind of drainage pan if you're concerned about the surface underneath your compressor.

Step 5: Open the drain valve part way. Air and condensation will start shooting out. As the pressure drops, open the valve the rest of the way.

Step 6: After it's finished, close the drain valve. Store your compressor in a clean and dry location.

Ultimately, a Drained Compressor Saves Cash

Don't want to spend the time draining your compressor? You'll pay in the long run, as this can shorten the compressor's life by half.

LATHE RUST PREVENTION

Excerpts from a web forum below

No matter what I do after a few days my Chucks, tools, centres and all other unpainted surfaces get this rust. What can be done about it? My workshop has a concrete floor and is fairly tight but I can't keep the moisture out and therefore the rust.

1. An oil film goes a long way to help avoid rust. Keeping your workshop just a few degrees above the outside air temp in colder months helps, so the tools aren't cool enough to condense moisture in the air.

2. Use a cloth cover. The cloth sheet will protect from airborne contaminants, but a plastic sheet will trap moisture and make a terrarium out of your lathe cover, thus making things worse. If you could cocoon it, you could put a desiccant into the cocoon before sealing (calcium chloride in a pan). (editors note. Some say a woolen blanket is best)

3. WD40 might be a good cutting lube, but I have seen damage done to delicate instrument bearings and parts by the stuff. As a penetrating oil it is good for rusted hinges and the like, but I wouldn't slather it on my lathe. It is a penetrating oil, not a machine lubricant and as a penetrating oil it will cut thru heavier lubricants.

4. Never use air lines for cleaning the chips from the lathe bed. Their use causes the chips to lodge under sliding members and in openings around moving parts with possible damage to the machine. A strong air stream will also blow off the protecting
oil film and cause rust formation. Multi Grade oil is more effective than monograde in rust prevention.

Editors note: Minitech wipe down all vulnerable surfaces in floor stock with a combination oil/kerosene mix on a rag for rust prevention. This does not turn gummy over time as do the lanolin based coatings.

BOOK REVIEW

" How (not) to paint a Locomotive"

by Christopher Vine.

The author had spent 6 years building a 71/4" gauge model loco and wanted to paint it to a high standard. This turned out to be easier said than done.
The complete process of painting, lining and reassembly took 2 years of frustration, mistakes and wrong direction, but finally won a gold medal at the 2004 Model Engineer Exhibition for best finished model in the show.
The lack of published help on the subject led to this book. It is not an academic 'treatise' on painting but a practical 'cook book' for someone starting with zero knowledge.
It is a hardback book , slightly less than A4 size with 168 pages, 130 colour photographs and 30 diagrams. It takes the beginner through all the necessary stages and processes of painting a model engineering subject including; selection and making of equipment,, paint preparation, spray and hand painting, fixing blemishes, lining, transfers and tips onhow to look after paintwork.
The challenges and obstacles the author faced are related together with his solutions to them. Paint running, rough finish, dust, insects, touching the still wet paint, dropping the tender, power failure in the middle of a job, faulty paint, water in the air supply etc etc all made for experience and hence subject matter for the book. The reader will not have to endure the resolution process and avoiding even one of them can cover the cost of the book, perhaps several times over..... $61.60 Incl GST

NEW PRODUCTS & SPECIALS

BA BOXED TUBULAR SPANNER SET- *Have you been looking for these???? Limited number available 0-10BA $74 incl GST*

BA OPEN ENDED SPANNERS *Laser cut 0-12BA Limited number available $69 incl GST*

NUMBER DRILLS- *Not really new, but haven't been available for more than 2 years. 20 piece set of the hard to get #'s 61-80 only $30incl GST*

GRINDING HONING AND POLISHING - *Workplace Practice Series Book Number 41. Normally $19.80 Super Special while stocks last $15.50*

The children had all been photographed, and the teacher was trying to persuade them each to buy a copy of the group picture. "Just think how nice it will be to look at it when you are all grown up and say, "There's Jennifer; she's a lawyer,' or "That's Michael, he's a doctor."

A small voice at the back of the room rang out, "And there's the teacher. She's dead."

Courtesy "A joke a day"

The cutting oil or not argument...

The purposes of using cutting fluids on the lathe are to cool the tool bit and workpiece that are being machined, increase the life of the cutting tool, make a smoother surface finish, deter rust, and wash away chips. Cutting fluids can be sprayed, dripped, wiped, or flooded onto the point where the cutting action is taking place. If working to fine tolerances, generally cutting fluids are used to keep temperatures down and minimise material distortion. Generally cast iron, brass, copper and aluminium do not require cutting fluid.

Lard Oil

Pure lard oil is one of the oldest and best cutting oils. It has a high degree of adhesion or oiliness, a relatively high specific heat, and its fluidity changes only slightly with temperature. It is an excellent rust preventive and produces a smooth finish on the workpiece. Because lard oil is expensive, it is seldom used in a pure state but is combined with other ingredients to form good cutting oil mixtures.

Mineral Oil

Mineral oils are petroleum-based oils that range in viscosity from kerosene to light paraffin oils. Mineral oil is very stable and does not develop disagreeable odors like lard

oil; however, it lacks some of the good qualities of lard oil such as adhesion, oiliness, and high specific heat. Two mineral oils, kerosene and turpentine, are often used alone for machining aluminum and magnesium. Paraffin oil is used alone or with lard oil for machining copper and brass.

Mineral-Lard Cutting Oil Mixture Various mixtures of mineral oils and lard oil are used to make cutting oils which combine the good points of both ingredients but prove more economical and often as effective as pure lard oil.

Soluble Cutting Oils

Water is an excellent cooling medium but has little lubricating value and hastens rust and corrosion. Therefore, mineral oils or lard oils which can be mixed with water are often used to form a cutting oil. A soluble oil and water mix has lubricating qualities dependent upon the strength of the solution. Generally, soluble oil and water is used for rough cutting where quick dissipation of heat is most important..

Soda-Water Mixtures

Salts such as soda ash are sometimes added to water to help control rust. This mixture is the cheapest of all coolants and has practically no lubricating value. Lard oil and soap in small quantities are sometimes added to the mixture to improve its lubricating qualities. Generally, soda water is used only where cooling is the

For Sale

AL320 geared head lathe 3 & 4 jaw chucks, faceplate & steadies Brand new $1800 Alan Littler 02 66491220

For Sale

Myford Super 7. Serial No SK66420 (Manufactured approx 1964) with Quick Change Gear Box . Clutch start, genuine Myford fixed and travelling steady. On well made low wooden stand with stainless drip tray. Screw on Burnerd 4 Jaw Chuck. Accurate, quiet and well looked after. Dead centre, drill chuck and arbor and a host of tool steel and boring bars, Excellent condition $3850 incl GST. Minitech 07 3889 7689