

WHAM



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NEWS, VIEWS and REVIEWS

Plating Model Engine Pistons

Recently I came across a small electro-plating kit from Micro-Mark small tool specialists that has allowed me to do something I have always thought of doing. I can now plate the piston of a favorite old model engine that has served me well in the past, but has lost its compression due to wear. I learned a bit about electro plating back in 1962 when I built a "T" roadster pickup for show and go. To save some money on the project I did a lot of the preparation grinding and buffing of parts prior to the plating process. Also before the age of liability came about, I was allowed in the plating shop to a large degree to watch the process. I also worked 3rd shift at Boeing Wichita and spent a lot of time in its plating dept doing bootleg parts for you know who. Enough about that. Lets talk about the subject that matters here.

The plating kit from Micro-Mark offers copper, chrome and nickel liquid solutions in 8 oz. plastic bottles along with a small DC power supply like what charges your cell phone. A small alligator clip is attached to the part to be plated and a small hand held wand with a cloth tip is used to wipe solution on the part. I found that the chrome solution was difficult to keep from flaking off the piston so I resorted to the nickel and got good results. Here's how I went about plating a piston.

1. Sand the piston and the cylinder lightly with 1000 or 1500 wet or dry auto finishing paper and kerosene. This will remove the high spots from both. Plating will not fill in the scratches and lines like paint that flows but will only add an equal and uniform layer of metal to the part.
2. Now the part must be **thoroughly cleaned**. Start by scrubbing it in lacquer thinner, dry it well and wipe it with a cotton tip soaked in automotive metal prep. Dry this off with a soft cotton cloth. A Tee shirt rag is the best. A plating shop always dips ferrous parts in vats of acid prior to beginning plating. I use PPG DX579 from the auto paint supply store. This stuff also brightens brass and eats corrosion and rust on other metals. Its handy to have in the shop, and is a mild phosphoric acid that is water soluble.
3. Put the alligator on the piston skirt over one of the wrist pin holes for reference later and wipe on a thin layer of the copper plating solution. Rotate the clip to the other side periodically to keep the plating uniform. The copper is like a primer is to paint and also allows you to again sand the piston with the 1000-1500 sandpaper and kerosene to smooth and brighten the surface for the nickel plating next.
4. Clean the piston with the lacquer thinner and dry well. Pour 1 oz. of nickel solution in a small plastic cup and with a new or washed out cloth mitten on the wand, submerge the piston in the solution by holding it with the alligator clip over one of the wrist pin holes. You may want a small fan to move air across the work. Move the wand around and watch the tiny foaming action that forms on the piston. After about 2 minutes change the position of the clip to the other wrist pin hole to maintain plating uniformity. After several minutes of this, remove the piston and dry it well and polish lightly with the sandpaper and kerosene. Now trial fit it in the cyl. with no oil being used on the parts. Put you finger over the plug hole and move the piston/rod assy. up and down to check compression. Keep re-plating the piston until the fit gives a noticeable increase in compression. Sand after each plating cycle. When you get the feel you want, assemble the engine with Shaler Rislone oil and fire it up for beak in.

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September 25, 2010 Meeting Minutes

ATTENDEES:

Mary Kay and George Avila, Les DeWitt, Jeff Englert, Jane & Earl Griffith, Darlene & Richard Kirkland, Regina & Marty Kline, Marty & Jim O'Reilly, Eleanor and Jack Phelps, Marilyn and Bill Schmidt, Dan Walton.

President Griffith called the meeting to order.
 The previous meeting minutes were approved as read.
 The treasurer's report was read by the treasurer, Jim O'Reilly

OLD BUSINESS:

None.

NEW BUSINESS:

Jeff reported on the Thank You card from Jim Findley's family.

A committee to locate a larger flying field was discussed. Bill Schmidt was nominated as committee chairman.

Jim O'Reilly reported on his NATS experiences; 3rd NOS Rbr. Earl finished 8th in Mulvihill.

Jeff and George summed up the Rocjy Mtn champs; Jeff had 3 1sts, 2 2nds, 1 3rd, George 3 1sts, 1 2nd, 1 3rd.

SHOW AND TELL:

Jim O'Reilly displayed his new twin pusher winder.

Earl G. showed off his Moffett with Sig's self-extinguishing DT fuse! He also showed a electronic rubber band melter, programmable in 5 sec increments.

Dan Walton brought in the RC Cloud tramp which uses a park Zone RC control from their P-51. A GWS prop replacement gets it up and going!

If you've Goggle Earth loaded on your computer, Fly to these coordinates for a bird's eye view of the our and other somewhat close flying sites.

WHAM	37 42' 37.65" N, 97 04' 39.30" W	Perry, OK	36 23' 02.22" N, 97 16' 16.58" W
Denver, CO	39 36' 37.20"N, 104 35' 18.56" W	Marion, KS	38 20' 14.40" N, 96 59' 06.80"W

Plating Model Engine Pistons

Of course run it rich and slow at first and the exhaust may be slightly gray for a minute, but should clear up to amber shortly. **NOTE:** You cannot plate cast iron pistons as it is like a metal sponge and the plating will flake off. I guess that leaves the Torp Green Heads out of the process as well as other pistons of meehanite iron. I plated some Bantam pistons of alloyed iron successfully and ran them hard and hot after break in. The kit costs \$45 and the extra bottles of solution are \$14 each. Now go and refurbish that favorite old engine.

All the Best, Wen Mac Bill, Bill Schmidt

Wheels for your Models

I have been asked where do I get the streamlined wheels that appear on my models. The answer is "from Home Depot". In the cabinet dept there are all sorts of drawer handles available and hiding there amongst the many are a 1-1/2" and a 2" dia. wooden drawer handle. The part nos. are P10513C-BIR-C for the 1-1/2" and P1051C-BIR-C5 for the 2" size. These are made in China (surprise) of a very pleasant type of wood to work with by hand. Let me describe how to go about shaping these into a lightweight, streamlined wheel for your gas and rubber models.

1. Take the knob and nest it in a small lid that fits its O.D., I find a small olive jar lid works well for this operation. Hold on to it and finish drill the center hole on thru to the other side in a drill press. The idea is to establish perpendicularity so that the finished wheel doesn't wobble.

2. Now take the knob and put the flared portion that would interface with the drawer front into a vice and razor saw off the large round part giving you the appearance of a rough streamlined wheel.

3. Sand or turn down a dowel or a steel shaft or drill bit, or what have you, that will fit tightly in the center hole with the sawn side out. Turn this assy. in a hand drill or lathe to smooth the sawn side down with coarse sandpaper and bring it into contour with the factory finished side when viewed head on. Hand sanding can be used also as the wood is very friendly and workable.

4. Now fit and glue a length of dowel in the hole and sand to blend to contour. Find the true center of the wheel by a cross scribe @ 90 degrees with a pencil compass. Again nest the wheel in the bottle lid and drill thru with a size to fit your axle.

5. Mount the two wheels on each end of a 6" to 12" wire that fits tightly and apply several coats of nitrate dope for rubber models, use butyrate for gas models. The wire allows handling the job easily. Sand lightly between coats and when the grain is filled to gloss or near gloss, apply black paint to cover.

6. Cut out the mask for the center hubs using an X-acto knife and a washer sized to suit on masking tape. Using your best eyeball, center the mask on the wheel and paint it white. Let it dry well and do the other side as well. Solder metal washers on your axle on both sides of the wheel using Manila folder paper for heat insulation during this process. You now have attractive, lightweight wheels for you model. Very Best, Bill Schmidt

Illustrations for Bill's Articles



Plating Kit



Nickel Plated Bantam Piston

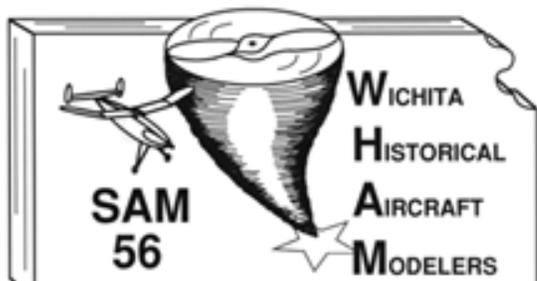


Hardwood Source



Finished Wheels

WHAM – News, Views and Reviews
Jeff Englert
10118 Sterling Court
Wichita, KS 67205



**FLYING
ACES**



**Sunflower Squadron
Wichita, KS**

The next SAM 56 Dinner Meeting will be at:

**Cortez Mexican Restaurant
344 W. 29th St.
Saturday, November 13, 2010
Social Hour @ 6:00 PM, Dinner @ 7:00 PM.**

Note: Fun Fly and Meeting are not on the same date this month. I can't remember why, decision was made in January, 2010!

**November 6-7 Fun Fly
November 13th Meeting**

Membership Information:

Open to all interested AMA members, founded to encourage and promote the model airplane building hobby. Member dues \$20 annually, Subscription only; \$12 annually, \$18 foreign.

Send checks to Jim O'Reilly, 4760 Battin, Wichita, KS 67220.

All memberships and subscription renewals are due January 1st of the new year.

Club Officers: President: Earl Griffith,

Treasurer: Jim O'Reilly, 744-0856

Vice-President: Bill Schmidt 744-0378,

Secretary: Jeff Englert, 722-7491