

# TRIPOLI WISCONSIN NEWSLETTER

## HIGH POWER ROCKETRY

March 2003

*Launches will begin at 10 AM. FAA waiver 10,000 ft AGL. Rain dates will be the following day (Sunday)*

### 2003 Launch Events

April 19, 2003

June 7, 2003

June 28 – 29, 2003

July 26 – 27, 2003

August 23 – 24, 2003

September 27 – 28, 2003

## ROCKETS FOR SCHOOLS

### 2003

Again Sheboygan, WI will be hosting their 7<sup>th</sup> annual Rockets for Schools Program. This event will take place on May 16 and 17. The actual launch will be Saturday May 17<sup>th</sup>. Activities will begin on Friday morning with students arriving from all over the state including Illinois.

Friday's event will include fit and finish judging of student rockets, speeches from NASA spokespersons including an astronaut, state dignitaries along with plenty of science and aeronautic displays.

If all goes as planned, we may have a B-2 Stealth bomber perform a fly over on Saturday.

The launch on Saturday will begin at 8 am and hoping to rap it up by 2 pm. So far we have 29 schools with level one rockets (I-284) and 9 schools with level two rockets (K-550). There will be other special launches performed by Tripoli Wisconsin Association to carry special payloads from local Engineering Universities. For more info visit their website.

**[WWW.rockets4school.com](http://WWW.rockets4school.com)**

## FOOD AND BEVERAGE AT BONG

TWA is happy to announce that food and beverages will be provided during all of our launches. Nana's food services will provide hot dogs, chips, candy, and hot and cold refreshments. If successful, Nana's will provide other main entrees like burgers, chicken, ribs and chili. Nana's is contracted with the DNR at Bong to provide food for all special events at the park.

### Raffles at Bong

This year TWA will announce items to be raffled off. If you have something of significance that you would like to donate to TWA to be raffled please contact Peggy Unger, our registration maiden, during the launch or email her at [munger@kUSD.kUSD.edu](mailto:munger@kUSD.kUSD.edu). Your donations will be recognized and appreciated.

## HELP OUT AND FLY FREE

TWA will be handing out coupons to fliers that help out with clean-up at the end of the day. The coupon will be dated and will be good for the next launch you attend within 60 days.

The TWA staff always appreciates your help, especially during those two-day launch weekends.

### TWA Launch Hotline

TWA's Launch Hotline will be activated at 9 PM the Wednesday before each scheduled event. This will provide you with an up to date forecast for launch day.

The Hotline will be revised each day including the morning of the launch. **(262) 677-2249**

Launches at Bong recreational park will be on the runway near Parking Lot F. Inquire at the front gate for directions.

# Cleaning Motor Casings BY: Chuck Nozicka

## **Cleanup**

After a long, hot day on the range flying rockets you have dirty rockets, motor cases, launch pad, alligator clips, launch rods and rails and clothes. Before you can collapse and rest you have a cleaning task to accomplish. Rocket motor exhaust crud needs to be removed before the acid in it does serious damage to motors, launch pad, rods or rails. The materials to quickly complete the task are listed below.

- ?? White distilled vinegar
- ?? Rubber, latex or vinyl gloves
- ?? Bottle brushes of various sizes
- ?? A line brush
- ?? Dish detergent
- ?? Scrub pad for cleaning Teflon pots and pans
- ?? Wet (baby) wipes

White distilled vinegar (not cider vinegar) is the agent for removing rocket motor exhaust crud from motor cases, launch rods and rails and alligator clips. It quickly removes crud. It is environmentally safe, can be poured down the drain and won't burn unlike some other cleaners. However, it will make your hands stink, so use gloves. You may also want an apron, perhaps a shop apron with the name of your favorite hardware store on it, to keep the vinegar and grime off your clothes.

## **Reloadable Motors**

The best time to clean reloadable motors is immediately after a motor has been used and while it is still warm. Most of the crud can be removed with a moist cloth, like a wet wipe. However, cleanup immediately after use isn't always possible, and sometimes crud firmly attaches itself to a case no matter how quickly it is cleaned.

You need a collection of bottlebrushes that fit your cases, except for cases large enough to get a hand into.

Disassemble the motor and dispose of the expendable parts. Wash the case, closures and any metal washers with warm water, dish detergent and a bottlebrush. Examine the case and other parts for crud that washing didn't and won't remove. Soak parts with encrusted crud in white vinegar. Usually only the case ends, not the whole case, need to be soaked which can be done by standing a case in a cup. The crud should come free within about 15-30 minutes. Rinse and dry.

## **Launch Rails**

Wash the rail with warm water and dish detergent, using the sponge for Teflon pans.

Rails get crud in the button slot that water and detergent won't remove. White vinegar and a line (hose) brush that slides into the slot will remove the crud. Remember to wear gloves to prevent your hands from getting stinky.

Bend the brush's handle 90 degrees and insert the bristles into the slot at one end of the rail. Slightly elevate the opposite end. Slowly pour white vinegar into the slot and slide the brush up and down the slot, particularly along the section that was next to the launch pad. Rinse with water and dry.

White vinegar can kill yard grass. You may want to do the cleaning over gravel or where the vinegar can be diluted and washed away, such as on a driveway. I clean my rail in a double wide concrete sink in my house's basement.

You may be wondering how to transport a dirty 6' long rail from the field to your house without making the interior of your car equally dirty. I use a nylon ski bag.

### **Launch Rods**

Use warm water, dish detergent and sponge to remove grime. Check for encrusted crud, and use white vinegar to remove.

### **Launch Pad**

Check the launch pad for exhaust residue. Clean and oil the threads of launch rod/rail set screws. White vinegar can be used to remove crud from a blast plate, while dish detergent and warm water will remove general dirt and grime.

To prevent crud from being blown down a launch rod/rail well, such as the well on a Quad-Pod launch pad, tamp a piece of Nomex cloth around the top of the well. The cloth may last only one day, but will keep motor exhaust out of difficult to clean places.

### **Alligator Clips**

The alligator clips from the launch controller usually get coated with a thick layer of crud by the end of a day. White vinegar comes to the rescue once again. Soak the clips in white vinegar. Slosh them around a few times. The crud should quickly fall off. Drain and dry the clips.

### **Rocket Interior**

The interior of a rocket can get dirty from ejection charges. This can affect some rockets, such as ones that use a piston ejection system. A moist clothes or wet wipes will remove black power residue.

## **Rocket Exterior**

A rocket can get smudge marks from dirty hands that have touched dirty launch pads, rods or rails. Many rockets can be cleaned with dish detergent, warm water and a scrub pad for non-stick (Teflon) pots and pans. This method may not work with rockets that have fragile decals. Test it on a less important rocket before cleaning the rockets that are important to you.

## **Nomex Heat Shields**

Heat shields get impregnated with ejection charge residue. They should be cleaned occasionally and inspected for holes. They can be washed in warm water. Usually all that is needed is a few rinses by hand under running water. Don't be surprised if the cloth's dye washes out during the first cleaning. Dry the heat shield before returning it to the rocket.

## **Your Clothes**

After a hot day on the range, your clothes probably stink. Once again white vinegar comes to the rescue. Add 1/2 cup of white vinegar to the wash to remove odors from clothes.

White vinegar is a versatile cleaner. A small amount in a wide mouth bottle can be used on the range to clean motor cases and other motor parts.

Wet wipes are an indispensable item on the range for cleaning hands after motor assembly and after loading a rocket on a dirty launch pad, as well as cleaning reloadable motors.