

The Flightline

Volume 30, Issue 11

Newsletter of the Propstoppers RC Club

AMA 1042 November 2000

Editorial - What Is a Club?

Well, what is a club? And what does this question have to do with the Propstoppers?

A club is a group of people with shared interests and our interests are RC model aircraft

Yep, guess that is a start but there must be more because some clubs are better than others are. So what are the things that make the difference?

People make a difference. Interesting people, knowledgeable people, friendly people, helpful people, people who can and do communicate make a difference and the Propstoppers have all of these.

A clear sense of purpose makes a difference but that is a no-brainer since we are all very much involved with building, flying and talking about RC model aircraft.

Organization and leadership makes a big difference and we are blessed in this regard. Our club leadership and its practices and involvement are outstanding. We have a well-run club, which is fiscally sound, conducts regularly scheduled activities and communicates well with the membership. Our leaders are readily available for discussion with members and issues are promptly discussed.

Excellent facilities and maintenance make a difference and again the Propstoppers club stands out. Our fields are excellent flying sites and each is in an attractive setting.

Now we are getting somewhere!

What would our club be without any one of these attributes? Certainly less than we have come to expect, but consider what the Propstoppers would be

without our fields!

Fundamentally important isn't it!

Well, what have we done lately to ensure that this won't happen?

Last month we held our annual "Night Fly". Only two people actually flew but a group of members cheered them on and shared in the experience. Guess what, we had complaints about flying outside the statutory hours established by our agreement with Thornbury Township as conditions for use of the field.

Our energetic President, Mike Black, apologized to the club for forgetting to inform the Township as he has in the past. But there is no need to apologize for one minor oversight among the many things he does for us.

However, consider this event. A couple of flights in the evening and we get complaints. Just how secure is our field and what are we doing so support our position?

The first thing we will do is to strictly follow the letter of our agreement. Henceforth, we will not fly on Sunday mornings; even with gliders and electric powered airplanes. Furthermore, we will set and publish the closing time which is by agreement, Sundown. We will publish this time each month in the Newsletter.

We must all support these actions and In addition, we must continuously work at building and strengthening our relationship with Thornbury Township. An excellent way to do this in the next few days is to support the Thornbury Township Day Festival at Dallett Field.

This event, which was re-scheduled from July due to weather, will be held on Saturday 4th November. It now involves flying and other activities by our club as well as balloon rides, an antique automobile show and a Dixieland band.

Come on out, fly, help and generally support the activity and show the township how much we enjoy and appreciate "our" field.

Dave 

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STOP PRESS

PROPSTOPPERS LOOSE FIELD

As we go to press, our President Mike Black has received a letter from Thornbury Township informing us that they will not renew our lease on Dallett Field next year. More inside.

Calendar of Events

Club Meeting *NOTE DAY AND DATE*

Thursday 9th November 2000
Marple Newtown Library 7:30 p.m.

Pegasus Flying Club 27th Annual RC Auction
Wednesday 22nd November 2000 7:30 p.m.
Bristol Township Senior Center
2501 Bath Road, Bristol, PA
I95N, Exit 413 North, turn left at light,
proceed to second light and turn right onto
Ford Rd. Go to end and turn right onto
Durham Rd. Bristol Twp. Complex on left
about one mile.

Wayne Modellers, Wayne NJ, Swap Meet
November 14th, from 9:00 AM to 5:00 PM
Contact Mike Black

Regular Club Flying at Dallett Field
Every Saturday and Sunday weather permitting

Daily	10 am til Dusk
Saturday	10 am til Dusk
Sunday	12 p.m. till Dusk

Propstoppers RC Club of Delaware County, Pennsylvania.

Club Officers

http://www.geocities.com/propstoppers_rc/
Webmaster Bob Kuhn kuhnrl1@home.com

President Mike Black
(610) 521-4692 MikeB10027@aol.com

Vice President Dick Seiwel (610) 566-2698

Secretary Russell Neithammer
(610) 565-9549 neithammer@aol.com

Treasurer Al Gurewicz (610)-494-8759

Membership Chairman Ray Wopatek
(610) 626-0732 kathyandray@hotmail.com

Field Marshall Al Tamburro (610) 449-4102

Newsletter Editor Dave Harding
(610)-872-1457 davejean1@home.com
4948 Jefferson Drive, Brookhaven, PA, 19015

The President's Message

Mike Black

Dear Fellow Propstoppers

Thank you to all members who were present at the October meeting for your expression of confidence in the current board. I can attest to the time and energy expended on the clubs behalf by Dick, Rusty, and Al.

In addition to the field maintenance, Dick takes care of most of the physical repairs to the gate at Moore Field, clean up at Moore Field and planning, construction and installation of improvements at Dallett.

In addition to taking notes and printing the minutes, Rusty has written several articles for publication in Model Aviation and is heading up the current campaign on the combat issue. He was also instrumental in the sound analysis and documentation that was done at Dallett.

Al has done an outstanding job as your Treasurer. He keeps accurate records and books and is quick to make sure that bills are paid on time and members reimbursed when appropriate.

We could not run this organization without our other volunteers and appointees.

Bud has done an outstanding job with membership through difficult times with membership turnover and lists of awaiting members. On behalf of the club, thanks Bud for your dedication and service. I'm sure Ray Wopatek will follow and try to fill those big footprints.

Jess Davis, Al Tamburro, Chris Catania, and Mike DiDomenico and wife have been invaluable to the club for years for their dedication and hard work. Dave Harding has brought a new perspective and ideas to the newsletter with the help of Bob Kuhn and contributing authors.

Thanks to everyone else who volunteered for the numerous tasks of field maintenance, cooking, painting, wind sock repair, picnic, fun fly, Township Festival, etc., etc. We thank you for your efforts and support. This is one of the things that make our club so great.

Please come out and show off your stuff at the Thornbury Township Festival. We need an extensive static display as well as flyers. Thank you in advance for your support.

See you at the field.

Mike 

October 3rd, 2000 Meeting Minutes

Russell Neithammer

The meeting was called to order at 7:30 PM at Marple Library by vice president **Dick Siewell**.

Membership Chairman **Bud McClellan** read the roll call - there were 33 members present. Thanks to Bud for his efforts over the past year as Membership Chairman. **Ray Wopatek** will be assuming the duties of the Membership Chairman as of the next meeting.

The minutes of the May 2000 meeting were approved as published in the October newsletter, by the membership.

Treasurer **Al Gurewicz** gave the treasurer's report with income of \$41.00, expenses of \$380.40 and a new balance of \$1766.67 reported.

Secretary Rusty Neithammer read two letters. The first was from the Thornbury Township Zoning Officer, advising the club of the hours permitted for flying activities as per our lease with the township, and stating that there had been complaints from residents over incidents where flying took place outside of these time periods.

The second letter was a response from President **Mike Black**, apologizing for failure to communicate with the Township regarding the planned Night Fly that was held on September 16, and advising that the issue would be presented to the membership.

In light of the above, our previous policy of permitting flying of electric's and gliders before the official start time of the day's flying activities is suspended until further notice. Thus, flying hours for all aircraft are as follows:

Monday through Saturday:	10:00 AM to dusk
Sundays and Holidays:	12:00 AM to dusk

It is also important that the premises be vacated as soon as possible after the end of the day's flying activities.

Old Business

Thornbury Township Autumn Day: This is scheduled for Saturday, November 4 (rain date, Sunday, November 5). The plans are for the event to take place as originally scheduled for the July 17th date, i.e., event starts at 10:00 AM at Squire Cheyney (Dallett field) and runs to 2:30 PM. As originally

planned, activities will continue at Goose Creek Park (by the old Westtown Train station/Goose Creek Grill restaurant) with an ice cream social and antique car show.

Flying activities will be as follows:

Have several planes in the air as visitors arrive at 10:00

- Helicopters
- Electrics/All up last down. Etc.
- Buddy box flying
- Hand toss gliders
- Lunch
- Aerobatics
- Combat

A static display of scale models will be available throughout the day. Contact **Ed Schumacher** for details. The new contact person for Thornbury Township is Ms. Jean Berlin. Due to other commitments, Ed will not be able to attend this event.

Chris Catania will again issue press releases to various local newspapers publicizing the event.

Pennsbury Land Trust Balloon Festival: This event was well supported by Propstopper pilots, and was well received by the event's attendees. Also, great coverage and photos appeared in our most recent newsletter. There were some safety issues (pedestrian traffic in flight paths, etc.) that need to be addressed if we are asked to participate in this event in the future.

Night Fly: This was held on Saturday, September 16, following the Pennsbury Land Trust flying demonstration. Marty Bakalorz and Rusty Neithammer flew night flights.

Wildwood fun fly, sponsored by the Cap May County WASPs, was held Sunday, September 24, from 10:00 am to 3:00 PM. Flying on the beach in Wildwood, were Propstoppers **Al Tamburro**, **Bud McClellan** and **John Zebuski**.

Shirt Orders: Three orders have been received so far. 15 are needed to enable a purchase.

New Business

Solo certificates were presented to **Greg Dugan**, and **Ray Wopatek**.

Ray Wopatek brought new hats, same style as before (orange and white), for purchase by the membership at \$6.00 each.

The November meeting date is changed to

Continued on page 4

Thursday, November 9, due to the presidential election, and the need to use the meeting room for voting activities.

Announcements:

"Rotofest" will be held October 14 and 15, at the Brandywine Helicopter Museum. Contact **Ed Glatfelter** or **Chuck Kulzinski** for details.

The RC Cloud Kings will hold an auction at the Assumption BVM Church in West Grove, on Saturday, October 14, at 9:00. See **Mike Black** for details.

The Pegasus Flying Club, Bristol, PA, will hold an auction on November 22, at 7:30 PM. See **Mike Black** for details.

Wayne Modelers, Wayne NJ, will hold a swap meet on November 14, from 9:00 AM to 5:00 PM. See **Mike Black** for details.

Send classified ads for sale items or items wanted, to newsletter editor **Dave Harding**, for free publication in the newsletter.

Treasurer Al Gurewicz presented the proposed year 2001 budget. Summary as follows:

Income:	\$4230.00
Expenses	\$4090.00
Carry-over 2000 ->2001	\$1356.67

It was proposed to increase the dues from \$55.00 to \$60.00. A discount of \$5.00 will be given to members who renew at or prior to the January 2001 meeting. New member dues would be \$60.00.

The recent AMA rule change regarding the banning of combat use for any engines over .30 displacement was discussed. Secretary **Rusty Neithammer** has already corresponded with AMA president **Dave Brown** and District Vice President **Dave Brown**, expressing objection to this rule and the manner in which it was imposed. Propstoppers sharing this view are urged to communicate this to the AMA.

Hitec RCD has advertised that they will contribute money to clubs for field improvements. Details were published in the most recent edition of RC Report magazine. Secretary **Rusty Neithammer** will apply for this on behalf of the club.

Break

The 50-50 winner was **Mike Black**.

Show and Tell

Ray Kiker showed his Zagi 400. This is a tape-covered foam flying-wing, speed 400 powered. Ray plans to use a 7-cell 600AR pack. Radio components are held in place by Velcro. This plane is fast and highly maneuverable.

Rusty Neithammer showed his new Sirex Wasp, from the Australian Don Incoll's plans. Power is an OS .46FX. The fuselage is constructed of two laminations of 3/16 balsa with 8-oz. fiberglass in between, which makes for a flexible and resilient structure. Covering is Monokote. Lighting system for night flying is controlled from the transmitter by an on-board glow-driver. The plane has been seen at the field over the last two weeks hovering and flying unmercifully slow.

The meeting was adjourned by Vice President **Dick Siewell** at 9:00 PM.

Rusty 

Web Tip - Check This Out

<http://www.fiddlersgreen.net/>

Really neat paper airplanes you, print, cut and paste. Allows you to engage in that fall football and beer season while actually working at your hobby.

Thanks Del Glennon. Ed.

Election of Officers

A point of view by Mike Black.

A healthy organization has a regular turnover of its board. This allows for a positive transition in leadership and for a greater and wider appreciation of all club activities and duties.

I strongly believe that any organization under the same leadership for an extended period of time takes on the personality of that leadership. We need new ideas and an infusion of energy.

It is also good to allow those who have worked hard to relax and enjoy their membership in other ways. It is the first responsibility of each officer to find his replacement.

Should this board get re-elected next month, I will encourage them to talk to their friends in the club and try to develop some new leaders. I have a few in mind. You can't run or hide, because I know where you live.

Thank you, Mike

Thornbury Township

Autumn Festival

Saturday 4th November 2000

Rain date Sunday 5th November

At

Squire Cheyney Farm

10:00 a.m. Until 3:00 p.m.

10:00 Demonstrations and Contests by the
Propstoppers Model Airplane Club

10:00 - 3:00 Automobiles on display courtesy
of the Chester County Antique Car Club.

12:30 - 2:00 Sing-along with the Dixieland
music of the wonderful "Goodtimers" quintet.

1:00 - 3:00 Tethered Hot Air Balloon rides

Bring a blanket or chair
Lunch will be available.

Thornbury Township, Chester County
Parks and Recreation Commission.

Propstoppers Activities At The Township Festival

We need you to come out and support this activity, as it is the only event in which we directly interact with our Dallatt Field Landlord.

We need you to turn out with airplanes to fly and show as well as helping with the glider toss, lunch preparation and other public activities.

However, we will have to be flexible with our flight operations in order to accommodate the quintet and possibly the hot air balloon rides.

Thanks for your understanding and cooperation.

Mike Black.

Propstoppers Loose Dallett Field

Propstoppers President Mike Black received the following letter;

THORNBURY TOWNSHIP
CHESTER COUNTY
8 Township Drive
Cheyney, Pennsylvania 19319-1019
PHONE (610) 399-1425
FAX (610) 399-6714

October 26, 2000

Mr. Michael Black, President
Propstoppers Model Aeroplane Club
110 Poplar Walk
Ridley Park, PA 19078

RE: Ground Lease

Dear Michael:

This letter is to inform you that Thornbury Township is exercising its option to terminate the agreement for the year 2001. The current lease will expire on December 31, 2000. Upon termination the Lessee shall remove all improvements. All improvements are to be removed by January 31, 2001. If you have any question or comments, please contact the Township Office.

Very truly yours,

Barbara Iacovelli

Chairman Board of Supervisors

Mike informed me that he has no idea what has precipitated this action as we have had little contact with Thornbury Township since the prior manager retired.

We clearly need to appeal this action and put on a first class show at the Township Festival this Saturday.

There are many other things we must do including getting our Thornbury Township resident members to assist in petitioning the Township. We need your help in soliciting the Township residents who attend the Festival.

Also we need to begin the process of looking for another field and we must make a plan for this at the next meeting this coming Thursday. Yes, please note the next meeting is indeed on Thursday the 9th at the library.

We should also consider what we need to do if we must make Moore Field our primary flying site. We need to explore whether we could expand the site to the top of the field. We need to consider what may be done about the ticks and we need to think about how long we would likely fly there, adjacent to the "high rent district" with the normal noise level of our current operation.

Did someone say electric?

Dave Harding editor - 

Tech Note -

Drag, It's All Behind You!

By Dave Harding

You are standing on the flight line at Dallett Field early on a foggy Saturday morning, chewing on your buddy's ear when something "whooshes" by.

"What was that" you yell, looking around. You don't see an airplane but you do notice a swirling streak through the fog where one just passed.

You have just "seen Drag"!

What does that mean? Well, it means that drag, as we know it, is actually what the airplane leaves behind it as a swirling wake.

Drag is the force required to continually stir the air to produce this wake.

In the wind tunnel, drag is frequently measured by probing and measuring this wake then adding it up to calculate the drag of the test object. Kind of neat really, measuring drag without actually touching the body!

Coe Donnellson, the former Director of Aeronautics at NASA Langley told me that "drag is unintended vorticity". Pretty profound, and if you understand it, you are already on a path to design better airplanes.

So, now that we know what it is when we see it, what causes it?

In my accounting system, there are three factors;

1. **Skin friction**
2. **Pressure from flow separation**
3. **Structured vorticity.**

All of these factors produce contributions to vorticity in the wake.

We will examine these three factors, this month we will look at Skin Friction and in particular the skin friction in airfoils.

Skin Friction results from pushing our airplane through the sticky air. The air molecules "stick" to the surface and the airplane motion causes the layer adjacent to the skin to shear. We can see it when we pull a spoon from cold molasses. If the molasses jar is very deep and we continue to pull the spoon out we see that there is a small hole or disturbance left in the mass of molasses. As the mass collapses into this hole it causes a somewhat random vorticity. We know this as a "slip stream"

The skin friction stems from the shearing action that takes place in the layer adjacent to the skin. We know this layer as the Boundary Layer as it forms the boundary between the body and the free stream air mass.

This boundary layer begins as a smooth transition from the body skin to the air mass. This is known as a laminar boundary layer, figure 1.

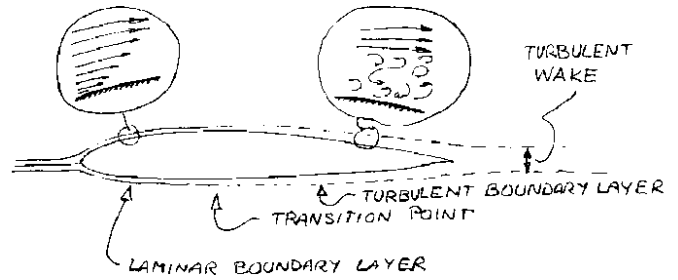


Figure 1. Boundary layer over an airfoil

Now, since we took Reynolds 101, we know that under certain conditions of body length and speed, this flow will transition to turbulent. This is known, interestingly enough, as a turbulent boundary layer.

If you examine the depiction of the conditions in this turbulent boundary layer, it is kind of obvious that the drag is higher than in a laminar one. Furthermore, the boundary layer gets thicker with the length of the body or airfoil.

Remember Drag lesson one; "Drag is unintended vorticity". Lots of vorticity here and it will stay in your wake forever!

This overall phenomenon of skin friction variation with Reynolds Number is a powerful one as depicted in Figure 2. (Our wings operate at $RN 10^5$)

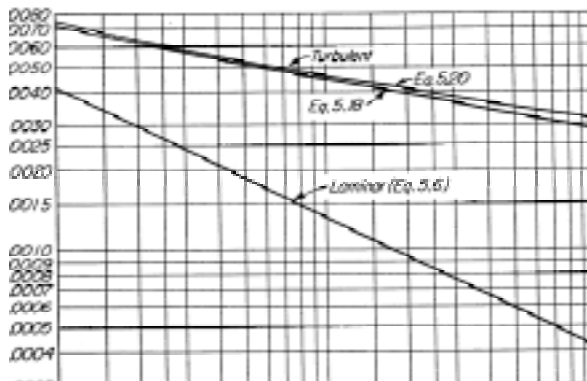


Figure 2, Variation in skin friction coefficient with Reynolds Number for a flat plate.

The transition from laminar to turbulent, and therefore the extent of the turbulent area, is dependent on several things over which we have some control. One is shape another is skin roughness.

As we will find with flow separations, the transition from laminar to turbulent boundary layer can be induced by an adverse pressure gradient.

Say wha! Well, let's just say that the shape is such that the flow is trying to turn too tight and becomes somewhat unstuck (spins out!)

This understanding was the basis of the supercritical airfoils used so effectively on the P-51. The early airfoils had shapes that cause the maximum surface velocities near the leading edge. The point where the velocity begins to slow is the point where transition is likely to occur.

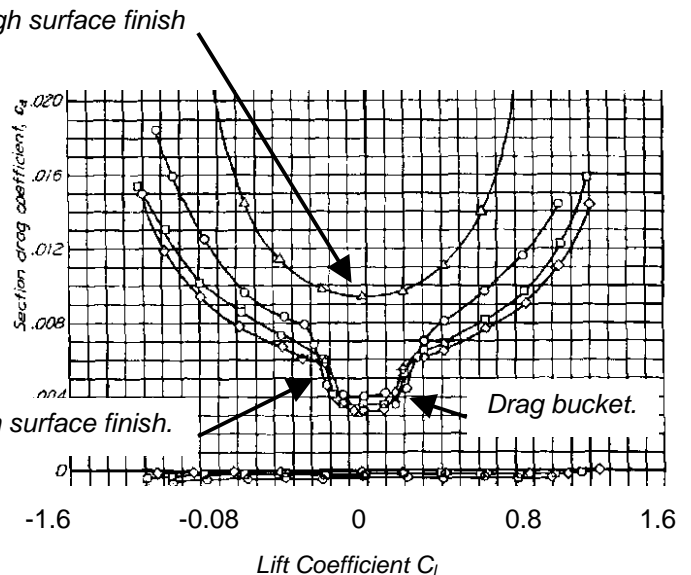
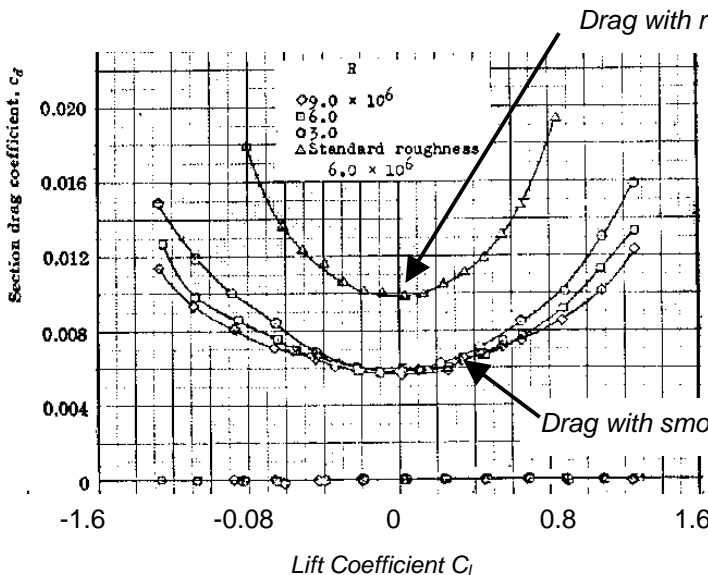
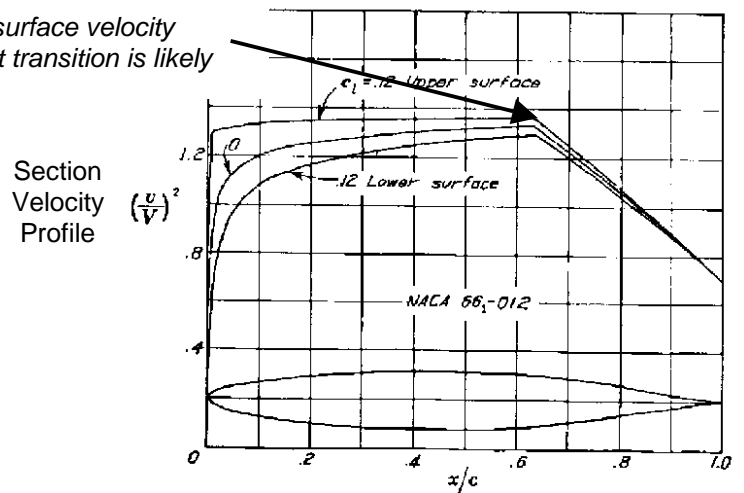
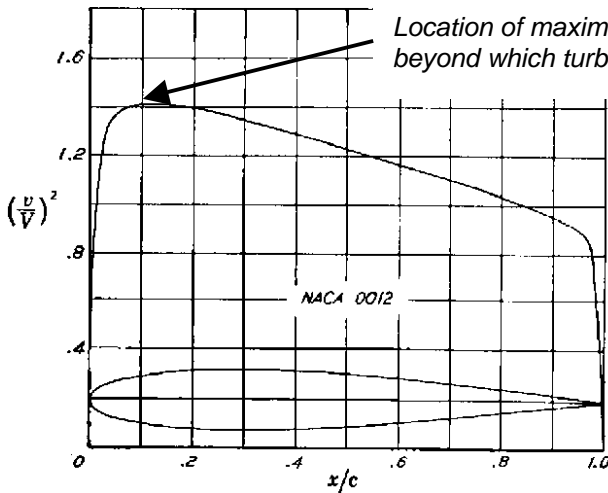
Supercritical airfoils are shaped such that the maximum velocity change occurs much further back, beyond half chord in some cases. This allows the flow to remain laminar over much of the surface and it results in a "drag bucket" where the drag is much lower at modest-lift, cruise conditions.

Comparisons between the NACA 0012 and 66-012 are depicted in the figures below. The top figures show the surface flow velocity (squared) profile along the

However, look what happens to the minimum drag with standard roughness applied, they have about the same drag coefficient at 0.010.

As I told you, the transition from the low drag laminar to the higher drag turbulent boundary layer is dependent on shape and roughness.

While this comparison and discussion of skin friction effects is directed to airfoils the same considerations apply to most of the surface area of the airplane. Generally, the greater the surface area the greater the skin friction drag. Carefully note what I said because it is not always true. For instance, the drag might be reduced with greater



chord. Note that the 0012 velocity peaks at only 10% of chord whereas the 66-012 peaks at 60%.

Note the clear drag bucket for the 66-012. At the bottom of the bucket the drag coefficient is 0.0035 vs. 0.006 for the 0012.

surface area if that area precluded a separation, but more on that next time.

In the meantime, get out that rubbing compound and wax and see if you can move that transition point.

Dave-

Dave Harding – Editor
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Brookhaven, Pa. 19015
610-872-1457

Propstoppers R.C. M.A.C

Volunteer Needed
Club Meeting Coffee and Refreshment
Chairman.
Help the Club in this popular and traditional
service and fund raising activity.

If you have an item for
sale please call or e-mail
me so I can include it in
the newsletter.

Dave Harding
610-872-1457
Davejean1@home.com

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