

Thrustline

The Newsletter by and for the Springfield Model Airplane Club

Website - <http://www.smacoh.org>

Volume 6

June 2004

Officers 2004

President
Bob McWilliams

Vice-President
Jeff Traub

Secretary
Joe Ferrara

Treasurer
Tom Minnich

Board Members

Jim Miller
Neil Perkins
Bob Riffle
Chad South

Past President/
Safety Officer
Clem Schmid

Field Marshal
Don Barns

Assistants 2004

Mower Maintenance
Harold Dickerson

Work Liaison
Neil Perkins

Chief Instructor
Vacant

Newsletter Editor
Clem Schmid

Memorial Day Weekend 2004 Has Come and Gone

Before the battle of WWII was won we lost over 1,000,000 of our family,
To give us the Freedom that we enjoy today.
Yet there are forces active in America who are undermining the principles
That this country was fought for and founded on.
God bless our Service Men and Women who continue to make the
Supreme Sacrifice so that we continue to enjoy our Freedom.



The picture of the aircraft above was taken in Germany in 1952

What Aircraft is it??

Would it make a good R/C Model?

THERE ARE THREE KINDS OF PEOPLE

Those Who Make Things Happen,
Those Who Watch Things Happen,
And Those Who Wonder What Happened

•
What kind of a SMAC Member do you want to be?

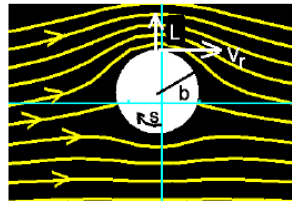
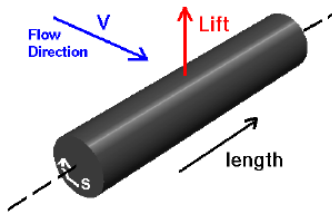


Lift of Rotating Cylinder

Glenn
Research
Center

Kutta-Joukowski Lift Theorem for a Cylinder:
Lift per unit length of a cylinder acts perpendicular to the velocity (V) and is given by:

$$L = \rho G V \quad (\text{lbs/ft})$$



ρ = density (slugs/cu ft)
 G = vortex strength (sq ft/sec)
 $G = 2 \pi b V_r$

s = spin (revs/sec)
 b = radius of cylinder
 V_r = rotational speed (ft/sec)
 $V_r = 2 \pi b s$

All that is necessary to create lift is to turn the flow of the air. We are familiar with the lift generated by an airplane wing or a curving baseball. But a simple rotating cylinder will also create lift. The details of how a rotating cylinder creates lift are complex. The lift generated is proportional to the rotational speed. If the cylinder were not spinning, the streamlines would be symmetric top and bottom.

HINTS FOR TWO-STROKE GLOW ENGINES

Today's two-stroke glow engines are technological marvels; they're powerful, lightweight, easy to use, and with proper use and care, will last for many years. Next to the radio system, the engine is one of the most expensive investments we make in Radio Control (RC) aircraft. Over the years, we've learned a lot about the care and feeding of engines, and we know there aren't any secrets to operating a model airplane engine correctly. From adjusting the fuel mixture and choosing the best glow plug to proper maintenance and using common sense to improve reliability, this article is full of helpful hints and information so you can have a happy relationship with your two-stroke glow engine.

Easy starting: Nothing is more frustrating than owing an engine that is difficult to start. Our frustration often leads to a flight that ends with a dead-stick landing or a crash. When you start any engine, there are three things to remember. For combustion to occur, your engine needs air, fuel, and fire (heat). If your engine won't start, check the carburetor to make sure that air and fuel are available and check your glow plug to ensure that it provides enough heat to ignite the air/fuel mixture. Remove the glow plug and attach the glow driver; its element should glow brightly. If it doesn't, replace it; if it does reinstall it. Close the needle valve and then open it three full turns. Place your thumb over the carburetor, and flip the propeller several times until fuel is drawn through the fuel line and into the carburetor. If you remove any one of these three elements from the equation, your engine will not start.

Two-stroke engine operation: The operation of a two-stroke engine is relatively simple. The crankshaft makes one complete revolution for every power cycle. During the piston's upstroke, the fuel/air mixture above the piston is compressed for combustion. At the same time, a fresh mixture is drawn into the crankcase below the piston. After combustion, the piston is forced downward, and the spent fuel charge is expelled through the exhaust port. Simultaneously, a fresh fuel/air mixture is drawn through the carburetor and into the crankcase. The intake valve is sealed, and the mixture (continued on pg 3).

Minutes of SMAC meeting, May 4th, 2004

The meeting was held at the Club flying field and was called to order at 7:20 PM by Club President Bob McWilliams. There were approximately 25 members in attendance.

Secretary's Report

The report was read by Club Secretary Joe Ferrara. The report was then accepted as read.

Treasurer's Report

There was no Treasurer's report given due to the absence of Club Treasurer Tom Minnich.

Old Business

Shelter: The item is now complete and the structure is open for use by the membership. Additionally, the gravel for the floor has been put in place. Thanks go out to all who assisted in this effort.

Field maintenance: All the early annual maintenance has been completed and the field is currently in good condition.

Port-a-john: The Port-a-john is in place.

Paint Ball Event: Preparations continue and the event is still scheduled for June 19th with a rain date of June 20th.

New Business

Field Parking: Signs have been posted to show where parking is permitted.

Introduction Packet: The issue of providing an introduction packet to new members has been raised again. The Board will discuss this matter and recommend a course of action to implement this Packet.

Out of Bounds Flying: The issue of flying outside of the designated areas has again been brought up. A discussion then followed about developing a written policy to handle this situation. Members are once more cautioned not to operate their aircraft beyond the designated field limits.

Board Meeting: The next scheduled Board meeting is May 18th at Castle's Country Restaurant in New Carlisle. All Club members are invited to attend.

At the conclusion of the meeting, the 50/50 raffle was held and Bruce Shaw was the winner of the \$6.50 prize.

There being no further business, a motion to close the meeting was made. The meeting was closed at 7:45 PM.

Respectfully submitted, Buy Club Secretary **Joe Ferrara**

Minutes of SMAC Board meeting, May 18th, 2004

The meeting was held at Castle's Country Restaurant in New Carlisle. The meeting was called to order by Club President Bob McWilliams at 6:30 PM.

Secretary's Report: The report was read by Club Secretary Joe Ferrara. The report was then accepted as read.

Treasurer's Report: The Treasurer's report was read by Club Treasurer Tom Minnich. The report was then accepted as read. Tom also stated that the Club currently has 84 paid members and the raffle fund has \$116.50 in it as of this date.

Old Business

Port-a-john: The Port-a-john is in place and available for use.

Paint Ball Shoot Event: The event is still on schedule. Neil Perkins has the airplane and is currently completing the construction. It should be ready soon. The date of the event is tentatively slated for June 19th with June 20th as the rain date.

Shelter House: Although the item is done, we still need to contact Darren Downs who has offered to get ground anchors for the structure.

Welcome Packet: Once again, the matter of issuing a welcome packet to new members has been raised. Following a discussion of the matter, it was also suggested that the packet be given to ALL members as no one seemed to know exactly who had copies of the relevant material and who did not. Additionally, it was also brought up that the Board should review current safety procedures to make sure they are adequate. Neil Perkins and Jeff Traub offered to make arrangements to get the package assembled, printed and disseminated to the membership.

Legal Issues: From last month's meeting, a report surfaced from a club in Florida of a member initiating frivolous lawsuits against a local R/C club. Although we have not had this sort of problem here, a discussion followed on handling such a situation and resulted in the Board needing to formulate a policy to deal with ejecting members who might engage in this kind of activity. The matter is still open.

U-Control Event: Ted Teach (and others) wish to hold a U-control event which is scheduled for October 9th (with October 10th as rain date).

New Business

Club Web Site: Paul Rueger has taken over the maintenance of the Club web site and has requested that if Club members have any relevant material in an electronically readable form, please forward it to him and he will post them on the Club web site (www.smacoh.org).

1/4 Year Members: We were informed that the AMA has a new policy of "Fly Before You Buy" where a prospective

Member can obtain a 90 day membership on a reduced cost basis, allowing them to try out the hobby before committing possibly a large sum of money. The issue was brought up to the Board as SMAC does not offer a partial year membership. It was decided that any such member could be invited to fly with the Club as a guest for this 90 day period, but if they stayed beyond that, they would be expected to join the Club.

Flight Instructor: Chief Flight Instructor Gary Yowler apparently did not rejoin the Club this year, so SMAC is in need of someone to take over this job. If anyone is interested, please contact one of the Club officers.

There being no further business, a motion to close the meeting was made. The meeting was closed by President Bob McWilliams at 8:09 PM.

Respectfully submitted By Club Secretary **Joe Ferrara.**

Two-stroke engine:

Is forced through the transfer ports and into the cylinder above the piston to start a new power cycle.

Secure fuel lines: Proper fuel line installation is very important. If your fuel line is too big, it may leak air or even slip off in flight. Fuel lines come in several sizes, so use the size that best fits the carburetor's fuel fittings. Air bubbles in the fuel line may cause the engine to run lean, and if the fuel line slips off, the engine will die. Be sure there is adequate slack in the line and secure it to the fuel fitting with a wire clip or a small length of fuel line slipped over the end of the main line.

Tight seals: If your engine begins to run erratically, and the mixture leans out even after you've adjusted the needle valve, you may have an air leak in the carburetor. Make sure the carburetor is firmly attached to the crankcase. If the intake is sealed with an o-ring, check it for cracks or breaks and make sure that it's seated properly, lies flat, and isn't distorted when the carburetor attachment screw is tightened. Make sure that all the adjustment screws and the needle-valve assembly are properly sealed and work correctly. Check that the fuel-intake fitting is tightly screwed into place and that it isn't damaged or cracked. The fuel tank and fuel lines must be properly and securely installed. If you have previously nosed the model over or made a hard landing, the fuel pick-up clunk may have shifted forward in the tank; this can pinch off the fuel supply. The clunk and pick-up line should move freely, and you should be able to hear the clunk rattle in the tank.

Fuel flow: If your engine always runs rich or floods easily, check the position of the fuel tank. The tank should be installed in the fuselage so its centerline is at or slightly below the carburetor's spray bar. Use scraps of foam to position it securely so it can't move around in the tank compartment. If the tank is too high in the fuselage, fuel will tend to be siphoned out and run freely into the carburetor. If the tank is too low or too far away from the carburetor, the engine may have difficulty drawing fuel into the carburetor, and it will run lean. To improve fuel draw, attach a line from the pressure fitting on your muffler to the tank's vent line. If you use a third filler line with your tank, close it off to allow the muffler pressure to enhance fuel draw.

From RC Prop Wash
Ocala Flying Model Club
Dick Smith, Editor, Ocala, FL

Aircraft of the Month



This well decorated Helicopter was seen in Afghanistan. Looks like someone had too much time on their hands.

Calendar of Events

1 June 2004

SMAC Club Meeting — 7:00 PM
Location: Club Field
Spence Road, North Hampton, Ohio

15 June 2004

SMAC Board Meeting — 6:30 PM
Castle's Country Restaurant
416 North Main St. (Rt 235)
New Carlisle, Ohio

19 & 20 June 2004

Board Event
Paint Ball Shoot-Out
12 noon on Saturday; 1 PM on Sunday
Location: Club field

6 July 2004

SMAC Club Meeting — 7:00 PM
Location: Club Field
Spence Road, North Hampton, Ohio

20 July 2004

SMAC Board Meeting — 6:30 PM
Castle's Country Restaurant
416 North Main St. (Rt. 235)
New Carlisle, Ohio

3 August 2004

SMAC Club Meeting — 7:00 PM
Location: Club Field
Spence Road, North Hampton, Ohio



Articles Needed For

Thrustline

cjschmid@att.net

Calendar of Events (continued)

3 August 2004

Electric Night Fly after Club Meeting
Location: Club Field

17 August 2004

SMAC Board Meeting — 6:30 PM
Castle's Country Restaurant
416 North Main St. (Rt. 235)
New Carlisle, Ohio

7 September 2004

SMAC Club Meeting — 7:00 PM
Location: Club Field
Spence Road, North Hampton, Ohio

12 September 2004

Family Picnic—Covered Dish Affair
Location: Club Field — 1:00 PM
Spence Road, North Hampton, Ohio

21 September 2004

SMAC Board Meeting — 6:30 PM
Castle's Country Restaurant
416 North Main St. (Rt. 235)
New Carlisle, Ohio

5 October 2004

SMAC Club Meeting — 6:30 PM
Location: Club Field
Spence Road, North Hampton, Ohio

9 October 2004 — 12:noon (Rain date 10 Oct 1:00 PM)

SMAC U-Control Event
Location: Club Field
Spence Road, North Hampton, Ohio

19 October 2004

SMAC Board Meeting — 6:30 PM
Castle's Country Restaurant

For sale: 10 brand new digital multimeters in original packaging. Reads DC voltage & current, AC voltage, resistance, transistor & diode test and continuity check. Easy to read 3 1/2 in. digital LCD readout, positive set selector switch, low battery indication, fuse and diode protection. 9V. Battery and test leads included. \$10.00 each. Contact Joe Ferrara