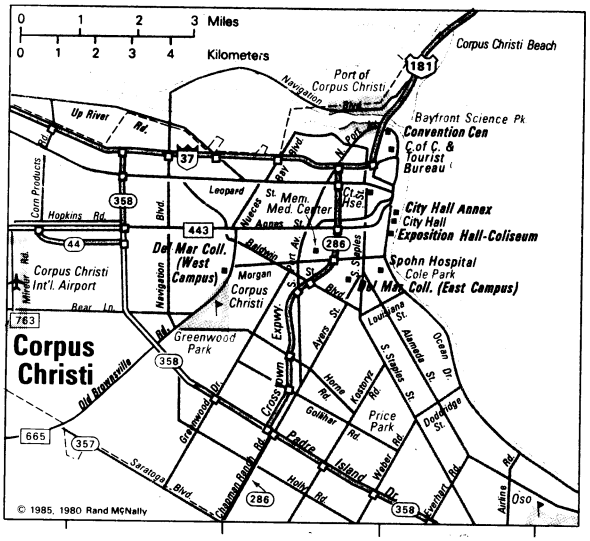
FLYERS ASSOCIATION NEWS

Number 92 - 1 May, 1992



Bruce James will host our 1992 fly-in November 12 - 14 in Corpus Christi, Texas. FBO will be Beech dealer, Chaparral Aviation.

Details and registration forms in next newsletter.

VORTEX GENERATORS

A decision has been made to have Vortex generators produced by Boundary Layer Research, Inc., headed by Robert Desroche. Following pages explain the reasons and procedures if you are interested. Sounds like a worthwhile investment. Current flight tests are under way.

President
Bill Passey
P-594

Vice President
Ralph Cohen
P-412

Editor
Jim Gorman
P-596

Welcome new members:

Terry Lester	P-221	J. M. Purswell	Looking
Kirby J. Guidry	P-475	George A. Hass, Jr.	P-390
J. Alfred Levert II	P-525	Gerald M. Stevens	P-319
Robert B. Bierbaum	P-447	Michael Canuso	P-258
Doug Seip	P-447	Tommy J. Koen	P-480
Richard Pelton	P-527	Carl Bierdeman	P-417
J. R. Cleveland	P-411	Mark Gardner	P-314

Member James Durrett is parting out two (2) Model A60's - P-192 and P-137. Still has many items available. Also has a brand new T10541 engine for sale.

FUEL SYSTEM

The fuel system on the Duke consists of an inboard leading edge cell, an outboard leading edge cell, a wing panel cell, a nacelle tank, and, optionally, a wet wing tip on each side. All tanks in each wing are interconnected, allowing full access to all the fuel in that wing when the selector valve is in the "ON" position. A single fuel cap in the standard system, or a second cap in the optional system, allow for single point fueling of each wing. Interconnect plumbing allows the fuel of one wing to be supplied to the opposite engine by placing the selector valve in the "CROSSFEED" position.

The fuel system is drained by seven snap type drains. Each inboard leading edge cell and each box section cell have a drain. Each main strainer has a drain and the heater strainer, located in the nose wheel well, has a drain. Optional wet wing tips are drained by a flush type drain located in each tip.

Under normal circumstances, fuel is supplied to each engine from its own wing fuel system. Submerged, electric driven fuel pumps located in each inboard leading edge tank allow for near full power engine operation following failure of the engine driven pump. These pumps are controlled by individual switches located on the pilot's subpanel. A warning light on the annunciator panel will alert the pilot to a failure of the fuel boost pump.

Fuel quantity is indicated by a float type system utilizing three transmitters and a single gauge for each wing. Two transmitters are located in the inboard leading edge cell and one in the nacelle tank. A circuit board attached to the gauge allows the system to be calibrated.

Ralph S. Cohen

BOUNDARY LAYER RESEARCH, INC.

"VORTEX GENERATOR SPECIALISTS"

March 25, 1992
Duke Certification

Mr. Raymond W. Randolph
P.O. Box 51823
Lafayette, LA 70505

Dear Ray:

I wanted to thank you for your letter of March 16th and to thank you for your interest in Vortex Generators for the Beechcraft Duke. As I mentioned during our phone conversation on March 19th, we have completed the initial V.G. testing on the King Air 200 and the Raisbeck 200. The results were spectacular! At 12,500 lbs. we saw a 67 kt Vso, that's a 37% increase in lift. Final certification is scheduled for mid May. The delay in that program (due to structural the requirements of the T-tail), has put us in a position to move into the King Air 90 or the Duke programs beginning April 1st. I anticipate similar improvements for the 90's, as well as the Duke. The areas of improvement we plan to address are: (all numbers are to be FAA certified):

• Stall speed clean	**Vs** - reduced 8 - 12 Kts
• Stall speed dirty	**Vso** - reduced 8 - 12 Kts
• Vmc	**Vmca** - reduced 5 - 10 Kts (w/ possible elimination)
• Best angle climb	**Vx** - reduced 3 - 8 Kts
• Approach speed	**Vref** - reduced 8 - 12
• Liftoff speed	**Vlof** - reduced 5 - 10 Kts
• Accelerate/stop	reduced 20 - 30%
• Gross weight increase	**150 - 300 Lbs.**(subject to structural analysis)
• Overall characteristics	no roll off in stall, plenty of prestall buffet!

~~We are in need of a certification aircraft for our program which should last approximately 3 - 4 weeks, and require 15 - 20 hours of flight time (ferry time not included). Upon completion, the aircraft would be returned to it's owner with a Vortex Generator system installed free of charge. The certified numbers would be forwarded to the owner upon STC issuance in the form of a POH supplement and airspeed dial face~~.

~~Should you or someone you know be in a postion to assist us with a certification aircraft, we would be happy to discuss a working relationship with~~ you.

Sincerely,

Robert J. Desroche
President

3125 100TH ST. SW - HANGER C75-5 - EVERETT, WA 98204 (206)353-6591 FAX :(206)355-3046

BOUNDARY LAYER RESEARCH, INC.

"VORTEX GENERATOR SPECIALISTS"

March 18,1992

Mr. Philip Kautt
Duke Flyers Association
c/o E G&G, Inc.
1850 K St. NW Suite 1190
Washington, DC 20006

Dear Phil,

Having been unable to reach you by telephone, I am sending this letter to introduce our new company, Boundary Layer Research, Inc., (BLR). In particular, I would appreciate the opportunity to speak with you regarding the cooperation of the Duke Flyers Association and BLR in the certification of vortex generators for the Beechcraft Duke.

In February of this year I left Micro Aerodynamics in order to pursue a more aggressive flight test and certification program on larger aircraft. Our efforts are now directly targeted at the upper end twins, including the Duke.

I have personally been involved in the vortex generator programs since their inception in 1986. At that time I made the very first test flight in a Baron equipped with VGs. Based on all the VG test programs I have run to date and the preliminary responses from our engineering team, I am confident that the Duke will become a star both in performance and characteristics.

After reviewing the included information, please call me so that we may discuss the details of our program and the possibility of BLR and the Duke Flyers Association working together to make the Duke a safer and even more enjoyable airplane to fly.

Very Truly Yours,

Robert J. Desroche
President

RJD/syd

attachments: Micro Letter
dated 26 Feb.

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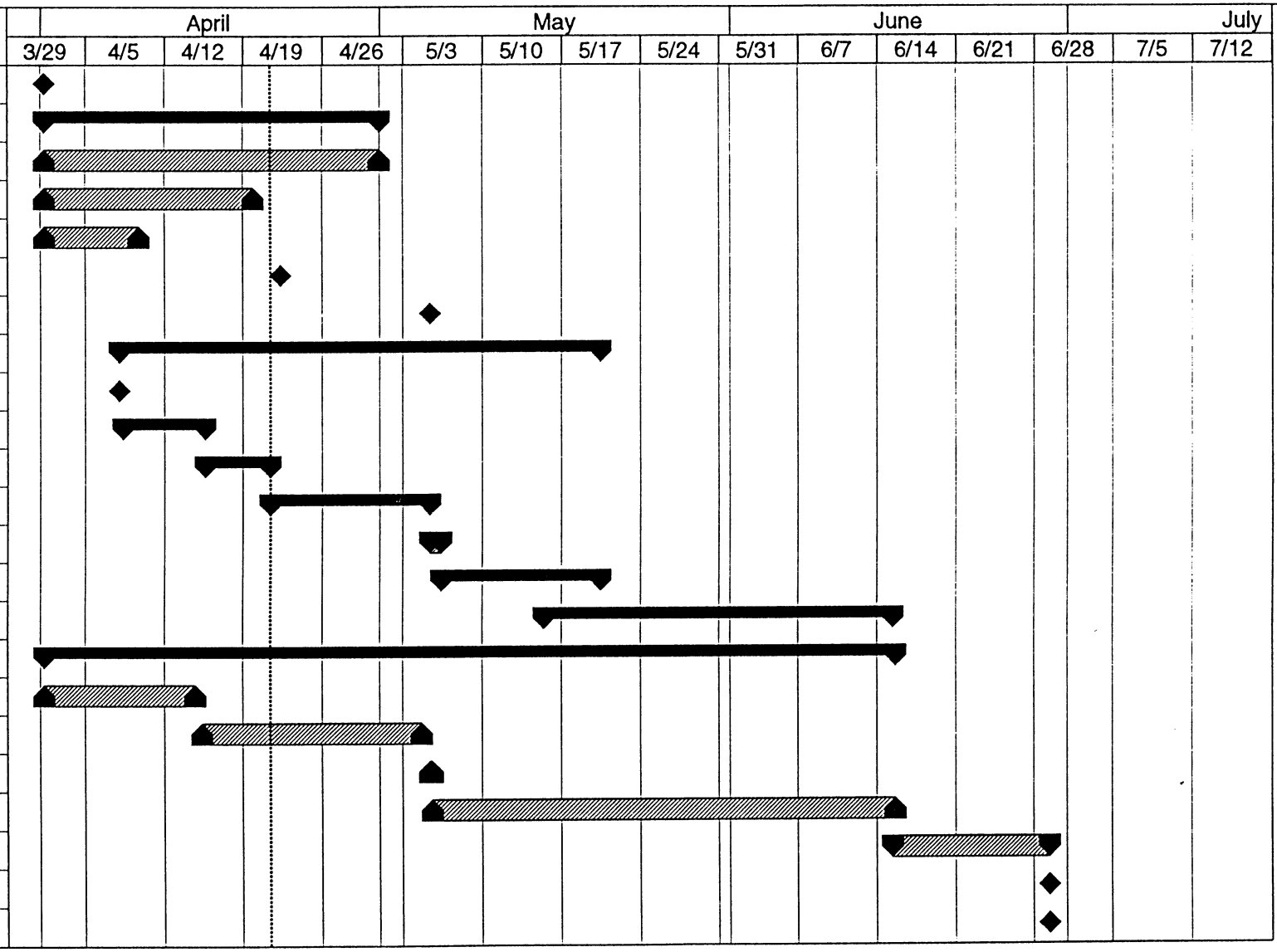
Boundary Layer Research, Inc. Beechcraft Duke VG Program



AeroAcoustics, Inc.
Prepared by: Gorder
Date: 4/21/92

Summary
Noncritical
Milestone
Critical
Progress

BOUNDARY LAYER RESEARCH, INC.

"VORTEX GENERATOR SPECIALISTS"

DUKE FLYERS ASSOCIATION

Vortex Generator
Escrow Account Info:

An escrow account has been established on behalf of the Duke Flyers to accept deposits of $1,000 each to secure the pre-certification price of $3,450 ($4,500 Retail) for our new Duke Vortex Generator system. This account is controlled jointly by Bill Passey - President, Duke Flyers Association and Bob Desroche - President, Boundary Layer Research, Inc. (BLR), and will be released to BLR only upon successful completion of flight test and issuance of the STC.

Please include the following information with your deposit - Name, Address, Phone number, and Serial number.

Submit deposits to: Duke Flyers Account - # 35381 904

Mail to:

Seattle First National Bank
Attn. John Lund, Asst. Vice President
Duke Flyers Escrow
P.O. Box 488
Mt. Vernon, WA 98273

Wire to:

Seattle First National Bank
Mt. Vernon Branch
Attn. John Lund, Asst. Vice President
Routing # 125000024
Credit Account - Duke Flyers Association # 35381 904

After sending your deposit, please call us at BLR (206) 742-4570 to register your order and help us get your kit ready for shipment. Please have the following information ready when you call:

N - Number
Serial Number
Major paint color by name and number

We will then enter your information into our system, and upon notification from our bank, will send a confirmation card with your line position number and approximate delivery date.

Please address any concerns or questions about this program to Bill Passey (602) 969-2291 Duke Flyers, or Bob Desroche (206) 742-4570 Boundary Layer Research.

Thank You!

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