

Investigation of the Impact of Turboprop Propulsion on Fuel Efficiency and Economic Feasibility

Kevin Richard Antcliff

Thesis submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Science

In

Aerospace Engineering

Mark D. Guynn, Co-Chair

Craig A. Woolsey, Co-Chair

Pradeep Raj

August 12, 2014

Blacksburg, Virginia

Keywords: turboprop, aircraft design, energy efficiency, FLOPS, Vehicle Sketch Pad

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Kevin Antcliff <antcliff@vt.edu>
 To: mchristy@mit.edu

Tue, Aug 19, 2014 at 11:47 AM

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These two images, MIT-1.png and MIT-2.png, are attached to this email.

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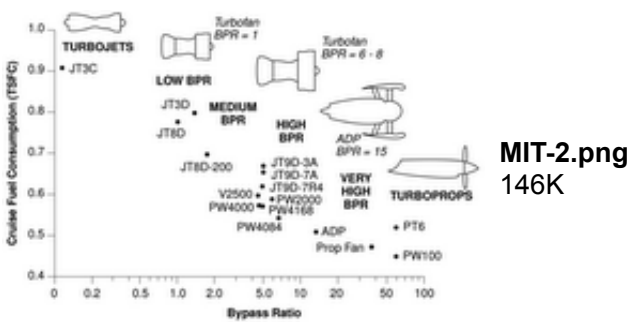
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Thank you for your time.

Kevin R. Antcliff
 Aerospace Engineering
 Virginia Tech
antcliff@vt.edu
 (757)268-7192

2 attachments



To: Kevin Antcliff <antcliff@vt.edu>

Hi Kevin

I believe you need to seek permission from the author to use the images.

Sorry I can't help with this.

Michelle

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Kevin Antcliff <antcliff@vt.edu>

Wed, Aug 20, 2014 at 8:54 AM

To: iaw@mit.edu

Good morning Prof. Waitz,

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The first, MIT-1, is found in Figure 3 of a report published by MIT that can be found at the following website:

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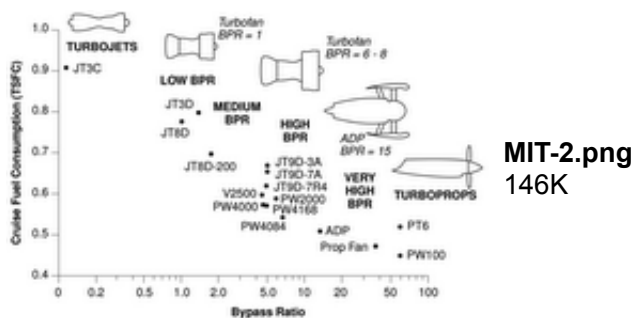
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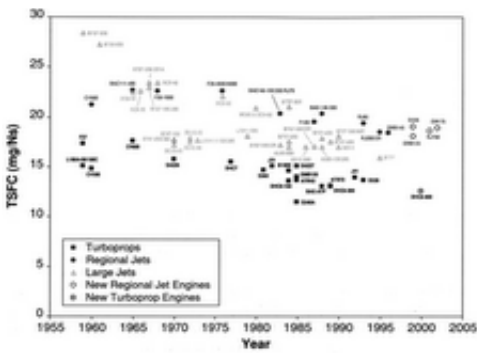
Thank you for your time.

Kevin R. Antcliff
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Ian A Waitz <iaw@mit.edu>
To: Kevin Antcliff <antcliff@vt.edu>
Cc: Ian A Waitz <iaw@mit.edu>

Wed, Aug 20, 2014 at 9:26 AM

Dear Kevin,

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Thank you,

- Ian

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Ian A. Waitz
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2 messages

Kevin Antcliff <antcliff@vt.edu>
 To: info@arvaigroup.com

Wed, Aug 20, 2014 at 2:53 PM

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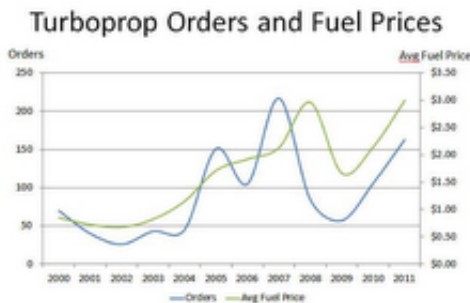
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It can be found at this website...

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Thank you for your time.

Kevin R. Antcliff
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Ernest S. Arvai <earvai@arvaigroup.com>
 To: Kevin Antcliff <antcliff@vt.edu>
 Cc: Schonland Addison <addison@airinsight.com>

Wed, Aug 20, 2014 at 2:59 PM

Hi Kevin,
 Sorry our contact form didn't work. Thanks for alerting us.
 Permission granted with pleasure.
 If you are able, please send me a copy of your thesis upon completion.
 (Or if you want an independent review of a draft, I'd be happy to look it over for you and provide comments.)
 Best regards,

Ernie

=====

Ernest S. Arvai
 Partner
 AirInsight
 t: +1.603.894.0000
 m: +1.603.548.9008
earvai@airinsight.com

[Quoted text hidden]

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RE: Speed-Fuel Trade Model

George.Price@faa.gov

Sent: Monday, August 18, 2014 7:02 PM

To: ANTCLIFF, KEVIN R. (LARC-E403)

Cc: hschlickenaier@crownci.com

Kevin -

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Best regards,

George Price
Crown Consulting, Inc.
FAA Interagency Planning Office
Tel.: 202-267-4972
Cell: 202-361-0582

From: ANTCLIFF, KEVIN R. (LARC-E403) [kevin.r.antcliff@nasa.gov]

Sent: Monday, August 18, 2014 3:33 PM

To: Price, George (FAA)

Subject: Speed-Fuel Trade Model

Mr. Price,

My name is Kevin Antcliff and I have been working with Mark Guynn in the ASAB at NASA Langley for the past 2 years. I have recently finished my Masters based on this work. In this study, which investigated the impact of turboprop propulsion on energy efficiency and economic feasibility, your speed-fuel trade model was utilized.

In my thesis, I included a screenshot of a part of this spreadsheet to show the user what I was working with. I was asking if you would be willing to allow me to use this image of a spreadsheet that you created.

Thank you for your time.

Kevin R. Antcliff
Aeronautics Systems Analysis Branch
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Full-Configuration Drag Estimation

2 messages

Kevin Antcliff <antcliff@vt.edu>

Mon, Aug 18, 2014 at 3:54 PM

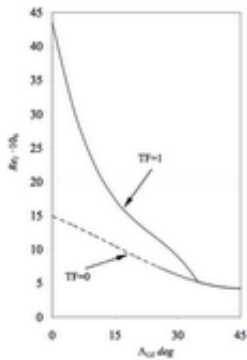
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Kevin R. Antcliff
Aerospace Engineering
Virginia Tech
antcliff@vt.edu
(757)268-7192



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