

---

**From:** jeffrey E. <[REDACTED]>  
**Sent:** Saturday, June 20, 2015 7:11 PM  
**To:** Peter Attia  
**Subject:** Re:

i did not repaint ANS, =C2 fuel expands when heated, . so though the plane intially=took the same amount of fuel the black wings heated the fuel and thr=w it overboard.!!!

On Sat, Jun 20, 2015 at 3:05 PM, Peter Attia =lt;[REDACTED]> <mailto:[REDACTED]> &=t; wrote:

I have a few ideas, and if wrong a few questions =80

Other ideas:

1.=C2 Even though you dismissed weight, I wonder if there is=something about the weight that alters the optimal fuel burn ration during=takeoff when thrust is highest that hinders range down line?=/p>

2.=C2 Does the pain alter the high lift devices such that ta=eoff and landing are less fuel efficient?

Observations:

1.=C2 I've never seen a commercial jet painted black=E2 I wonder if the problem is the color or the application/variant y=u used

2.=C2 Supersonic jets (no need for Bernoulli) are black all =he time (though this may have more to do with anti-radar) and/or they may =e willing to give up range in exchange for these

3.=C2 I was trying to do a Gedankenexperiment <<http://www.merriam-webster.com/dictionary/gedankenexperiment>> to simplify the problem: imagine two fast cars, identical in every=way, except one is painned black. Would the same range-reduction effect be =bserved? If not, would it be because cars are dominated by rolling resistance and form drag, while subsonic pla=es are dominated by skin friction? Or would the effect be absent because t=e speeds are too low?

Lastly, a question:

When you "undid" this black paint thing, did you strip off the black paint, or did you just re-paint? If the latter, did you recoup the lost range?

P

From: jeffrey =. [mailto: [REDACTED] <mailto: [REDACTED] > ]  
Sent: Saturday, June 20, 2015 5:34 AM  
To: Peter Attia  
Subject:

figure it out yet

--

please note

The information contained in this communication is confidential, may be attorney-client privileged, may constitute inside information, and is intended only for the use of the addressee. It is the property of JEE

Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately by return e-mail or by e-mail to [REDACTED] <mailto: [REDACTED] > , and destroy this communication and all copies thereof, including all attachments. copyright -all rights reserved

--

please note

The information contained in this communication is confidential, may be attorney-client privileged, may constitute inside information, and is intended only for the use of the addressee. It is the property of JEE Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately by return e-mail or by e-mail to [REDACTED] <mailto:jeevacation@gmail.com> , and destroy this communication and all copies thereof, including all attachments. copyright -all rights reserved