

## Jeff Clark

---

**From:** Jeff Clark  
**Sent:** Wednesday, October 24, 2012 1:09 PM  
**To:** Allison Rajakumar; Andrew Wong; Bill Larch; Bob Campbell; Boese, Doyle; Booth, James E.; Bradley Carter Intertek; Carter, James; cathy.devlin@afonchemical.com; cca@lubrizol.com; corey.trobaugh@cummins.com; Elisa M. Santos (elisa.santos@infineum.com); Greg Shank; James McCord; Jan Peters; Jeff Clark; Jim Gutzwiller; Jim Matasic (James.Matasic@Lubrizol.com); Jim McGeehan (jiam@chevron.com); Jim Moritz Intertek; Jim Rutherford; JingChun Xie (xjc@luberdi.com.cn); Joe Franklin Intertek; Ken Goshorn; Mark Cooper; Mark Sutherland; Martin Thompson; michael.l.alessi@exxonmobil.com; Pat Fetterman; Perry Grosch; Philip Scinto; philipe.f.saad@cummins.com; Riccardo Conti; Ron Buck; Salgueiro, Bob; Scott Richards; Sean A. Moyer; Shawn Whitacre (shawn.whitacre@cummins.com); Steven Kennedy; Tom Wingfield; Torreman, Marnix; vikersey@ashland.com; wvda@chevrontexaco.com; Zack Bishop (zbishop@tei-net.com)  
**Subject:** Minutes of Cummins SP Conference Call - October 24, 2012  
**Attachments:** Attachment 1 - ISB 20121018.pptx; Attachment 2 - ISB Correction Factor Analysis - Cummins SP Oct 2012.ppt; Attachment 3 - Batch C Injector Adjusting Screw Information.pdf; Attachment 4 - Batch C vs. Batch D Injector Rocker Lever Adjusting Screw.jpg

**Attendance:** Shawn Whitacre, Corey Trobaugh, Terry Dyson, Ron Buck, Zach Bishop, Sean Moyer, Jeff Clark, Jim Moritz, Jim Matasic, Elisa Santos, Jim Gutzwiller, Allison Rajakumar, Jim Rutherford, Pat Fetterman, Jim McCord, Perry Grosch, Martin Thompson, Scott Richards

### **ISB New Hardware Introduction and Correction Factors:**

Three ISB reference oil tests have been completed on Batch J Cams / Batch C tappets. Both Jim Rutherford (ChevronOronite) and Elisa Santos (Infineum) have analyzed the data; their analyses are attached (Attachments 1 and 2, respectively). Jim and Elisa reviewed their work for the panel. Both analyses produced essentially the same result for projected correction factors, and the concern may be whether or not is it reasonable to change correction factors based upon three results. It was noted by Jim that there is no significant difference showing between Batch J/C and Batch H/C. Elias also commented no significant difference between those but there is a difference between those and the target. Shawn Whitacre noted that there may be some value in combining Batch H and J (which is shown in Elisa's analysis). Zack Bishop noted that H and J cams were machined at the same facility, while the prior batches were machined elsewhere. Allison noted a visual difference (though not yet showing as statistically significant) in tappet wear between Batch H and J cams.

During further discussion on a path forward, SwRI noted that there will be another data point available within a week (expected EOT this weekend, with data possibly available by mid next-week). Given that a more robust data set will soon be available within a week, the panel decided to reconvene on this issue once that data has been made available and included in the analysis. ***A conference call has been tentatively scheduled for Friday, Nov.2 at 10 a.m. Eastern.***

### **ISM New Injector Adjusting Screw Batch:**

Attachment 3 shows some commentary on the new batch; Attachment 4 is a photo. Zack Bishop stated that TEI has about 4 - 5 months of inventory. After brief discussion, consensus was to allow a running change to the new batch (without any special effort to introduce or evaluate the batch).

### **ISB Engine Life:**

The last of the original ISB engines has been sold. The panel will need to keep this as an ongoing item. Cummins and TEI are currently exploring options to maintain the life of the ISB test.

The conference call concluded at 11:40 a.m. Eastern.

Best Regards,

**Jeff Clark**

Technical Manager - Engineering / Analytical Services

**ASTM Test Monitoring Center**

6555 Penn Ave

Pittsburgh, PA 15206

412.365.1032

412.999.2075 cell

ASTM Test Monitoring Center  
<http://www.astmtmc.cmu.edu/>

ATC European Registration Centre  
<https://atc-erc.org>

ACC Monitoring Agency  
<https://acc-ma.org>