

**Cummins Surveillance Panel Teleconference
June 11, 2019 10:00 – 11:30 EDT**

Attendance:

Sean Moyer - TMC
Nick Ariemma - LZ
Christian Porter, Bob Campbell - Afton
Jose Starling- SwRI
Andrew Smith – Intertek
Mark Cooper - Chevron Oronite
Dan Lanctot – TEI
Phil Shelton – Cummins
Jim Gutzwiller, Elisa Santos, Bob Salgueiro, Nancy Diggs – Infineum
Prasad Tumati – Haltermann Solutions

Agenda:

- 1. ISB camshaft taper measurement update**
- 2. Discussion of results from coordinated referencing**
- 3. Cummins Industry Statistician**
- 4. Next steps for approval of hardware**

Meeting Minutes:

Andrew informed the panel of the passing of Jim Moritz and there was a moment of silence for Jim and his family.

1. ISB camshaft taper measurement update

The actual taper measurements are more severe than previously thought. The reject rate using the previously agreed to spec would mean getting virtually no cams from this batch. Widening the spec to 0.030 mm would allow for ~190 cams to be used from this batch. Andrew presented cam lobe taper measurements vs wear results for the 4 reference test results from lab G and A.

2. Discussion of results from coordinated referencing

Elisa presented the results of the current round of coordinated references compared to the historical results. It appears that the results are unchanged with new batch of hardware. There was

Andrew Smith motioned to continue using the current correction factors with Batch L camshafts and batch E tappets. Bob Salgueiro seconded. There was no opposition and no waivers.

3. Cummins Industry Statistician

Elisa agreed to be the Cummins statistician going forward.

4. Cam Lobe Taper Spec

There was discussion about the ISB cam lobe taper spec. Does it live in the procedure? The spec lives at TEI. We will need a motion to inflate the spec. TEI has agreed to start measuring all lobes of the cams and screen them to the spec.

Bob Campbell motioned to increase the cam lobe taper spec from 0.015 mm to 0.030 mm. Bob Salgueiro seconded the motion. Bob Salgueiro added a comment that this is a significant shift and that is it good to record this change and that we should be sure to monitor future tests. There were no negatives and no waives.

5. Coordinated Reference Test Calibration Status

Jose Starling motioned that the calibration effective date for the coordinated reference tests be 6/11/2019. Andrew Smith seconded. There were no negatives and no waives.

6. ISM Kit Backlog

There is a backlog of ISM kit orders. Phil said that the ISM backlog should be cleared this month and the kits will be at TEI shortly.

7. Future ISB Camshaft batches

Jose Starling asked what the current batch will last and whether we should start work on the next cam batch. Dan Lanctot indicated that he and Phil Shelton are working on that issue and are considering moving to a new supplier for the grinding of the castings to speed batch production. Dan asked if it would be acceptable for TEI to measure only the front and rear lobe measurement and skip the middle measurement to speed the screening process. Everyone agreed that was acceptable. Phil asked what would need to be done if there was a cam batch supplier change. Andrew said that much like any other hardware batch it would require coordinated references. The change to suppliers would be the same casting supplier but a different grinding supplier.

Meeting adjourned at 11:15 EDT.