

Caterpillar Surveillance Panel

Conference Call 12/18/2014 8:00AM CST

Attendance:

Jim Gutzwiller
Martin Thompson
Hind Abi-Akar
Mark Jarrett
Elisa Santos
Andrew Stevens
Bill Larch
Michael Conrad
Kevin O'Malley
Bob Campbell
Jim Moritz
Sean Moyer
Pat Fetterman
Mike Alessi
Matt Bowden
Jim McCord

Agenda Items:

Sulfur Tests
CAT C13 Second Ring Deposits
1K/1N Governor

Old Business:

Discussion Items:

C13 Second Ring Deposits

Elisa Santos Presentation



Severity adjustments
for R2TC by lab 12 18

Only Lab A and G were included due to the long period without testing from the other labs.

The SA suggestions are only meant as a temporary solution while a permanent fix is investigated.

For light carbon, lab G was normally below lab A until the most recent test at lab G.

Heavy carbon was very close for all cylinders for most of the test. Levels were normally very low. The most recent test has two rings with high amounts of heavy carbon.

The data set used for these SA calculations included the original target data. This data is questionable due to differences in rating methods between labs. This was rectified shortly after the precision matrix with a workshop. It was discussed that perhaps the SAs should be calculated using data after this workshop starting in ~2007.

The intent from previous conference calls was to apply an ICF or declare the parameter non-critical for references and then apply SA at each lab to bring them together. Otherwise the SAs alone do not fix the issue with referencing and capacity.

Declaring it non-critical is a very serious decision that needs to be discussed in detail. This could potentially allow engines to reference with Zero deposits or 100% deposits.

Expanding the K value to bring in some of the borderline failure references may allow limits to be established that stop extremely low references.

The discussion began to focus on having a workshop to correct the issue for two upcoming references at both lab A and lab G. This is being planned for the 6th 7th and 8th of January. It is intended that all labs that intend to run C13 references will have mechanics and/or engineers present. Major items will include parts prep and engine construction.

There will also be a data review of operational data from reference tests between the two labs and a WebEx will be provided. 06-07' compared to more recent tests. As far back as we can with saved 6 minute data.

Motion: Martin Thompson Second: Bob Campbell

Increase the K value for references to +/-3.0 for second ring carbon on all references that completed on or after 10/24/2014. The severity adjustments will be reviewed after the workshop and subsequent referencing in early 2015.

Opposed: 0 Waives: TMC Motion Carries

Data that is reviewed needs to be in a similar format for ease of composition. SwRI will submit the order of their data to facilitate putting a common format together.

1K/1N Governor Gear

This part is not in supply. CAT is working with the supplier to get this part. It was previously discussed that many items could be moved to electric pumps and external controls to prevent the need for many of the peripheral components on the SCOTE engines.

1P Liner

The liner surface finish and other critical items are being reviewed with the supplier. A large amount of work is being done to compare surface finish of older and newer liners. There appears to be more graphite pullout and porosity than older liners. The part is still on path to get new liners in 18 weeks.

C13 Oil Consumption

The new valve guides have been used on one candidate test and at this point do not appear to be making a significant impact on the oil consumption. It is too early to tell for sure whether or not a change has occurred. Early indications are that it is a no harm change.