Sequence VID LTMSv2 Working Group Conference Call Minutes
June 19, 2010 13:30 – 14:45 CDT
Minutes Prepared by: Martin Chadwick

Agenda (not published prior to meeting)

1. Roll call
2. Review goals
3. Next meeting?

Attendance

Martin Chadwick (Intertek), Jo Martinez (Chevron), Doyle Boese (Infineum), Phil Scinto (Lubrizol), Jim Rutherford (Chevron), Rich Grundza (TMC), Janet Buckingham (SWRI), Bruce Mathews (GM), and Art Andrews (ExxonMobil)

Review Goals

The group began with the following statement emailed from Charlie Leverett, Sequence VI SP Chair, on August 13, 2010.

I would like this group to come up with the recommendations to be forwarded to the SP for approval. During this task I'd like for this group to determine if we need three references on a new engine, if the current runs per reference period are accurate and if the engine hour correction is working properly along with the V2 review.

Based on this request the group defined four individual topics to frame our initial review.

1) Develop a recommendation concerning the adoption of LTMSv2 for the VID SP prior to the face-to-face meetings in November.
    a. If it is determined that adoption of LTMSv2 is desired then some form of limits should be recommended to the VID SP to serve as a starting point for SP discussion.
2) Evaluate the need for three references on a new stand-engine combination.
3) Review the current candidate runs per reference defined for the Sequence VID.
4) Reevaluate the current VID engine hour correction.

LTMSv2 Recommendation

It was noted that the majority of the attendees were the same people who developed LTMSv2 who had already invested considerable time and effort over the last two years in the process believing that it added value. Based on this the

discussion focused primarily on the concerns of Bruce Mathews and Rich Grundza. Through these discussions there were three primary concerns highlighted.

1) Bruce indicated that GM feels the added complication of revising the LTMS is to obtain minimal gains and might not be worth the effort of continuing the revisions. After further discussion there were two action items identified to address this issue.
    a. Bruce was asked to discuss within GM the desired results the LTMS should obtain and share these with the group.
    b. Martin volunteered to put together a summary of how LTMSv2 addresses some of the perceived problems that currently exist in the LTMS.
2) Rich reiterated concerns from the TMC that LTMSv2 might allow reference entities to operate too far from target in standardized units (Y_i). This has been reviewed in several forms in different groups and the LTMS TF STG has indicated that the approach of using the best estimate of reference entity severity (Z_i) and limits defined by reviewing the actual measured units is superior to the historical equidistant limits in standardized units (Y_i).
3) Doyle raised concerns about the composition of this group. In particular the lack of participation by test engineers. This was shared by many in the group in particular since the intent of defining Z_i limits is that they should be set based on an intimate understanding of test operation, measurement techniques, and the test formulation appetite. Based on these discussions there were two primary actions.
    a. All attendees were encouraged to obtain feedback from engineers or others who have intimate experience with the Sequence VID and encourage them to attend future calls.
    b. Barring additional input this group will evaluate LTMSv2 using the current VID lambda of 0.3, Z_i limits of +/-2 and default e_i limits.
        i. Janet agreed to revisit her previous VID LTMSv2 work with the above parameters.
        ii. Rich agreed to work with Janet to evaluate how this might have impacted engines that were abandoned prior to obtaining calibration status.

Three References for Initial Calibration

It was discussed that the current VID LTMS and the default LTMSv2 both require three references on a new reference entity (stand-engine in the VID). This was discussed extensively in both groups before reaching these conclusions and considered the best return for the references invested. There was some thought that a tiered or “Reduced K” type limit might be possible that would allow certain stand-engine combinations to calibrate with two runs only and group members

were encouraged to investigate potential solutions but no action item was defined.

VID Candidate Runs per Reference

It was discussed that the VID recently revised the candidate runs per reference based on data available at the time. There were no specific concerns the group was aware of and the current limits seemed reasonable. Group members are encouraged to perform their own review of the data available but no action item was assigned.

VID Engine Hour Correction

Jo volunteered to revisit her review of the engine hour correction with the most recent data. She will target having the review available in two weeks and we will discuss it at that time.

Next Meeting

It was agreed that the group would meet again on September 2nd, 2010 at 13:30 Central time.

Action Item Summary

1) Bruce to discuss desired results from LTMS within GM and share the results with the group if possible
2) Martin will put together a summary of how LTMSv2 addresses some of the perceived problems that currently exist in the LTMS.
3) All attendees are encouraged to discuss LTMSv2 with engineers or others who have intimate experience with the Sequence VID and encourage them to attend future calls.
4) Janet will revisit her previous VID LTMSv2 work with the lambda of 0.3, Z_i limits of +/-2 and default e_i limits.
5) Rich will work with Janet to evaluate how LTMSv2 might have impacted engines that were abandoned prior to obtaining calibration status.
6) Jo will revisit her review of the engine hour correction with the most recent data.
7) The group will meet again on September 2nd, 2010 at 13:30 Central time.

Meeting adjourned.