

## Sequence VH Surveillance Panel Meeting September 20<sup>th</sup>, 2022 2 PM EST, via Webex

### Roll Call:

Afton: B. Maddock  
 ExxonMobil: P. Rubas  
 Ford: R. Zdrodowski  
 General Motors: B. Cosgrove  
 Haltermann: E. Hennessey, I. Mathur, W. Hairston

Infineum: D. Boese, A. Ritchie (Chair)  
 Intertek: A. Lopez  
 Lubrizol: G. Szappanos, T. Catanese  
 OHT: J. Bowden  
 Oronite: J. Martinez, R. Stockwell

SwRI: D. Engstrom, T. Kostan, P. Lang  
 TEI: D. Grosch  
 TMC: R. Grundza

Valvoline: A. Savant

### Meeting Summary:

- 6 VH test results (3 on 940, 2 on 931, 1 on 1011-1) on the new fuel.
- T. Kostan's attached presentation summarized the data.
- SP is in broad agreement that the new fuel batch is mild on sludge, but unable without more data, to make a decision on the path forward to address this.
- New fuel data appears on target for piston varnish (AP50) but mild for average varnish due to the 2 mild cam baffle varnish contributions to the average.
- Group agreed to reconvene on Sept. 23<sup>rd</sup>.

Next call: Friday, September 23<sup>rd</sup> at 10 AN EST via Webex

### Meeting Details:

The group reviewed the 6 VH test results on the new fuel from IAR, SwRI and Afton using the attached presentation from Travis Kostan from SwRI.

Run	SwRI1	SwRI2	IAR1	IAR2	Afton
1	931	940	940	1011-1	940
2	940	1011-1	931	931	1011-1
3	1011-1	931	1011-1	940	931
Complete					

The group agreed that the indications are that the new fuel is mild on sludge (AES) but, appears close to target for piston varnish (AP50) with the average varnish mild due to the 2 mild on varnish cam baffles which are 2/3<sup>rd</sup>s of the average varnish rating. Note the new fuel is less mild on AES than it appears, when the data for the new fuel is compared against the current fuel including the Correction Factor currently applied to it. The mild RAC results for the new fuel are also a concern, but the group noted it has been aware of the mild trend for the current fuel. A strong positive is that the new fuel does discriminate on sludge comparing the datasets for 940 (high levels of sludge) and 931 and 1011-1 (both showing low levels of sludge) with the main concern the lack of AES separation between 931 and 1011-1. However with their AES targets (931: 8.0 and 1011-1:8.4) within the standard deviation of the parameter, and only 3 results available (2 on 931, 1 on 1011-1) no firm conclusions can be reached about the true performance of these oils with the new fuel and it remains likely that with more data the 2 calibration oils do show the correct AES separation. The group discussed adjusting the remaining test plan to reduce the collection of more 940 to allow a larger dataset of 931 and 1011-1 to be compiled. The Chair requested the statisticians' group to come to the next SP call ready to advise on the merits and concerns about making such an adjustment.

Haltermann offered that they were prepared to try to make the new fuel more severe on sludge by adjusting its composition (reducing the AES values for all 3 oils), but that they did not have a high level of confidence that this would improve the sludge handling capabilities of the fuel with regard to the separation of the AES data for the 3 calibration oils. Comments were also offered that this could hurt the varnish values which are thought to be acceptable with the current new fuel offering.

With a further 1011-1 result on the new fuel expected from SwRI in the next day and further discussion needed anyway, the SP group agreed to hold a further VH start until reconvening in 3 days on September 23<sup>rd</sup> at 10AM Eastern.