

## Ford 6.7L VTW Test Update Meeting

May 18<sup>th</sup>, 2026

### Attendance:

- Infineum: Andrew Smith, Jacob Goodale
- Afton: Ben Maddock, Bob Campbell
- TMC: Brad Transue, Sean Moyer
- Oronite: Ramoun Mourhatch, Shelby Skelton, Josephine Martinez
- Ford: Mike Deegan, Rob Zdrodowski
- Intertek: Alex Dannheim, Josh Ward
- SwRI: Jose Starling, Bob Warden Travis Kostan
- TEI: Derek Grosch
- Lubrizol: Robert Slocum
- ASTM: Sid Clark

### Agenda:

- Report Form Updates
- Reference Testing Updates and Plan
- AOB

### Meeting Details:

- Report Form Updates
  - Document describing report form updates attached to meeting minutes
  - After later discussions, these will be completed at the same time other desired updates are ready and finalized
- Reference Testing Updates
  - 7 Tests currently completed on latest procedure
    - 3 on original FVTW3 blend
    - 3 on new FVTW3-1 blend
    - 1 FVTW1 (High Wear Oil) completed for differentiation testing
  - Lab B has completed their first reference test and reported to TMC, with their second test scheduled for completion tomorrow
    - TMC to post updated LTMS with newly completed references

- Afton is in the process of setting up a stand as well, and can contribute 2 additional FVTW3-1 runs to the LTMS for target and precision statement setting
- Ford is working on finalizing funding for 2 tests, one of which has already ran at SwRI
  - Stand A2 just completed a run on FVTW3-1 which will be posted to LTMS soon
- Stand G2 not committed to referencing again, G1 expires in September
- In total, 12 runs are expected on FVTW3 and FVTW3-1 with the current timeline expected to complete by the end of June
- Labs should contact TMC and let them know their expected usage of reference oils
  - FVTW3-1 has only about 10 tests worth remaining
  - TMC to reach out to supplier to discuss a reblend
- PC10 vs D975 Fuel Discussion
  - Many years ago, a decision was made by the group to allow D975 fuel to be used in the VTWT in an effort to save cost
  - This discussion was brought up again as we are moving toward finalization of the procedure if the group would like to remove fuel as a possible variable and establish PC10 as the only allowable fuel for the test
  - Lab A is the only lab that currently uses D975 Fuel (Lab G, B, and D only use PC10)
    - Is this lab an outlier?
    - Lab effects would be convoluted with fuel effects since Lab A is the only lab that uses D975 (and only uses D975)
    - Would Lab A consider running a reference on PC10 in an attempt to deconvolute the data set?
      - Lab A has ran a significant number of tests in support of this “matrix”, they can discuss with management on possibly running this test
  - The group has reviewed data in the past and no fuel effect was noted
    - Jose S. to revisit this data and provide it to the group for the next meeting
    - Stats group can also review the data further if needed
- Outlier Analysis
  - Other industry wear tests utilize outlier analysis and this group should consider adding it to this test

- Internal standard deviation (rocker arms from the same test) is high, which would make it unlikely a data point would be removed using a similar outlier analysis
  - Even if it is unlikely something would be removed, it is still best practice to perform the analysis
- How would we bin rocker arms?
  - Size, position, intake/exhaust, left/right side, front to back?
  - Andrew to reach out to stats group to determine if a positional analysis can be performed to determine if location biases results, which could help us decide how to properly bin data for outlier analysis

#### Action Items:

- Labs need to reach out to TMC to discuss referencing plans to ensure reference oil stock is adequate
- TMC to reach out to Reference Oil supplier to begin discussing a reblend (10 tests remaining)
- PC10 vs D975 data gathering (Jose S.)
- Andrew to Request Statisticians review of possible positional bias in wear vs location of rocker arms in support of Outlier Analysis being added to procedure
- Andrew to work with TMC with updating LTMS to only include latest procedure runs for clarity
- Critical Parts List review for the next meeting

#### Next Meeting:

- Planned for Monday June 15<sup>th</sup>, 2026 at 10AM Eastern