

Sequence VJ Working Group
August 20th, 2026 at 2:00 PM EST via MS Teams

Attendees: Rob Zdrodowski, Mike Deegan, Pat Lang, Dylan Beck, Christian Exposito, Angela Willis, Tony Catanese, Al Lopez, Joe Anthony, Ben Maddock

1. VJ Working Group

a. SwRI

- i. Run 4 completed a 288h test with good sludge formation (6.71 merits with new ratings)
 - 1. High oil consumption is reduced but unacceptable at 3560 grams
- ii. Run 5 started with various minor changes
 - 1. Oil consumption slightly elevated from run 4 but reduced from run 3 thanks to the modified break-in provided by Ford
- iii. Pursuing higher tension aftermarket rings for Run 6

b. Haltermann Carless fuel delivery delayed to early September

- i. Half planned for SwRI, the other to Intertek

b. Intertek

- i. Intent is to replicate Intertek's run 2 940 result but with the detuned fuel
- ii. Afton to provide operational data from Ford PCM to better match spark timing values

c. Lubrizol

- i. 48 hours into the test and observing excessive oil consumption
- ii. Despite improved break-in procedure, observed 1000g consumption at 24h mark and 1800 g at the 48h
- iii. Advocated for termination but unclear what will come of this run

d. Afton

- i. Not running while rings and fuel issues are pursued

e. Ford

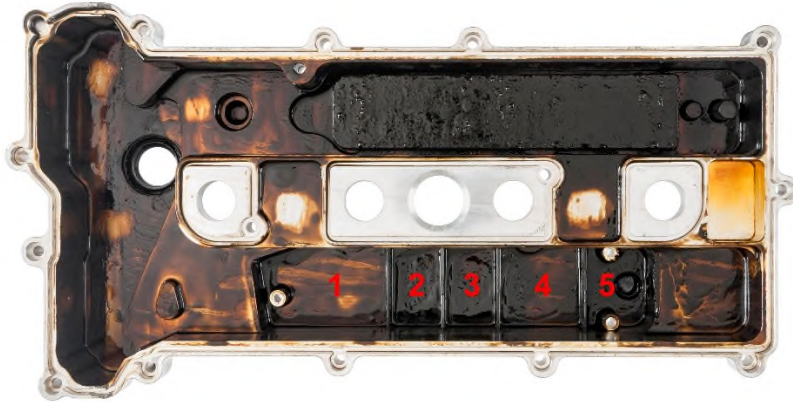
- i. Oversize quote from KS was expensive and provided with no lead time
 - 1. Indications that they aren't interested in supporting
 - 2. Pursuing EU transit van piston and rings that utilize a thicker, higher-tension ring pack.
 - a. MY23 and MY24 Transit Custom

f. Feedback from Angela Willis

- i. Advocated for ACC Test Readiness template
- ii. Facilitator should be pursued
- iii. Parallel efforts to complete:
 - 1. Draft procedure
 - 2. Test report
 - 3. Rating forms
 - 4. Etc
- iv. Al Lopez echoed similar comments and suggested a review of the parts list to prepare for hardware purchase if the research phase is successfully completed this year

g. Commonization effort

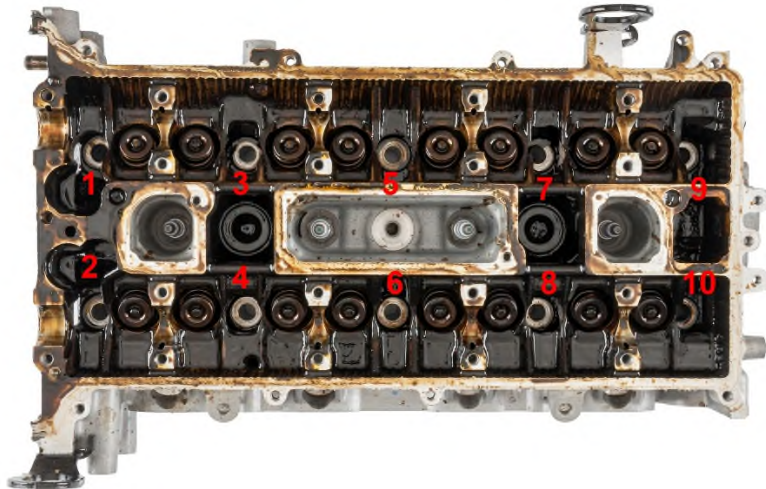
- i. See tracking sheet.
- ii. New rating locations added to the sheet. Pictures below:
 1. Remove RAC baffle to access the 5 points below



2. RAC baffle



3. Lower valve deck ratings



h. AOAP Content

- i. See attached slide deck as presented to API AOAP.
- ii. Metrics to achieve by December 2026:
 1. Prove discrimination
 - a. RO 940 AES = 6 to 7 merits
 - b. RO 1011 AES = 8 to 9 merits
 2. Prove reproducibility
 - a. Repeat in at least two labs
 3. Technical requirements
 - a. 216 h duration preferred
 - b. < 2000 g oil consumption

iii. Status update

1. Three primary paths exist

- a. 1. Fuel supplier A, stock pistons
 - i. Discrimination exists but fuel batch was too severe
 - ii. Detuned batch arriving mid-August
- b. 2. Fuel supplier B, stock pistons
 - i. Severity with RO 940 is close but at 288 hours
 - ii. High oil consumption has been reduced but still a concern
- c. 3. Fuel supplier B, modified pistons
 - i. Evaluate low compression ratio, honing, and oversize influence

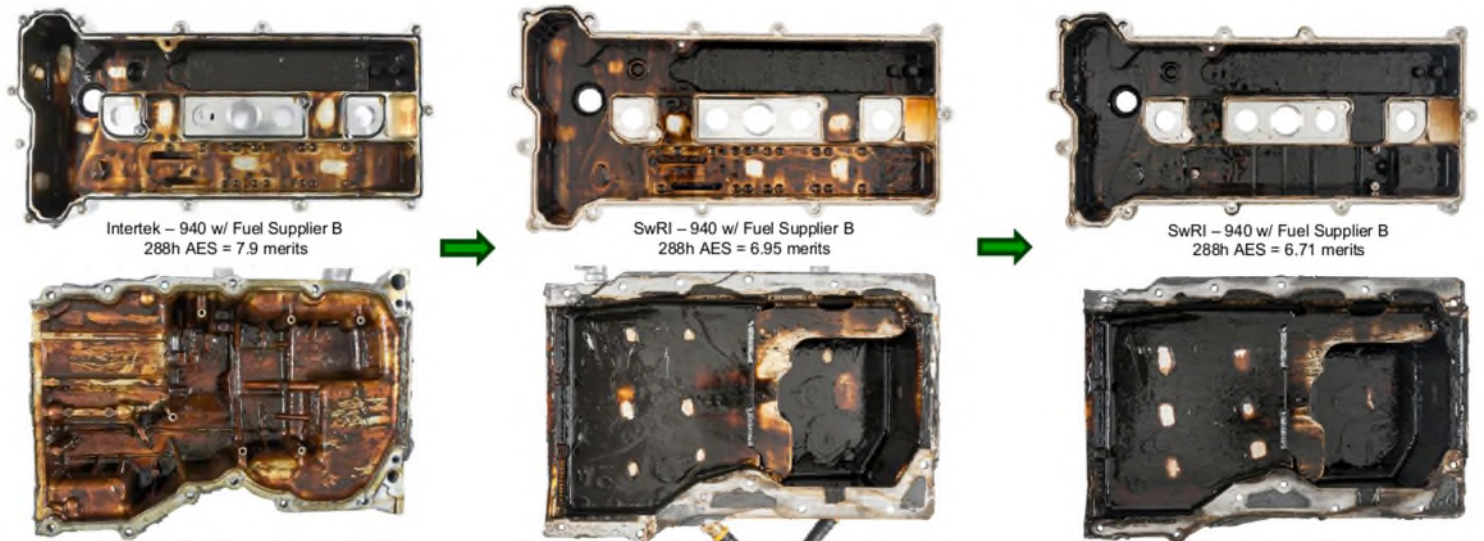
2. Test engine, stand, and operation are not commonized

- a. 465 unique combinations reduced to 15 combinations
- b. Active effort of the group, some variables need to be further evaluated before a decision can be made

3. Hardware challenges at scale still exist

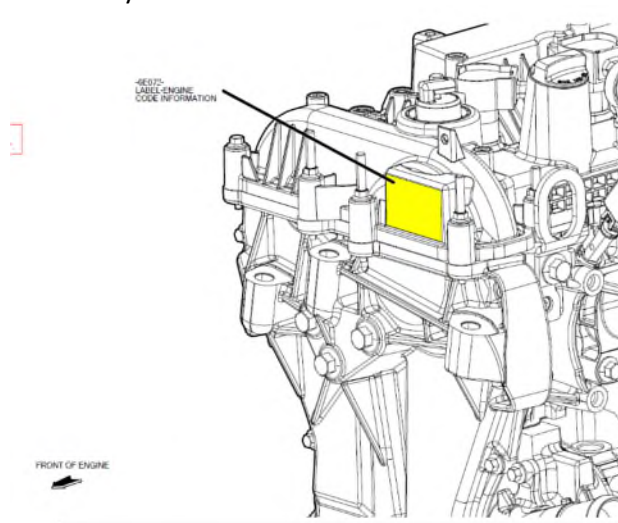
- a. Piston & ring geometry under evaluation
- b. FCS can't supply oversize pistons

iv. Visual updates:



i. Actions:

- i. Labs to log engine serial numbers
 - 1. Located on factory valve cover



- a.
 - ii. Ford to confirm if VCT clogging will be an issue despite the disconnected cam phaser
 - iii. Ford to locate oil squirter print to begin reviewing alignment angle, flow rates, pop-off pressure, etc
 - iv. Valvoline to pursue cooled exhaust options
 - iii. Ford to provide additional information on the updated break-in routine. Relevant parameters include: spark timing, target lambda, oil and coolant temperatures - **COMPLETE**
 - v. Ford to investigate with ring group to see if there's anything more that could be done to ensure the rings have properly seated to reduce oil consumption
 - vi. Ben to thoroughly review the LTMS tab and produce better Layman's explanation of changes at each lab but with the details available.