Sequence VH O&H Meeting
September 16th, 2025 at 10:00 AM EST via MS Teams

Attendees: Dylan Beck, Pat Lang, Mike Lochte, Joe Anthony, Ben Maddock, Al Lopez, Tony Catanese, Mike Deegan, Bob Campbell, Indresh Mathur, Ed Hennessy

Notes:

M-000054-3 Fuel Approval Matrix

A1	A2	G1	G2	D
940 (175651)	931 (193861)	940 (175644)	1011-1 (191485)	931 (190601)
931 (193862)	1011-1 (193857)	1011-1 (199200)	931 (191483)	1011-1 (190602)
1011-1	931	931	1011-1	931

- M-000054 Fuel Batch Approval
  - M-000054 batch was too mild with two 940 results. **Lab A & G match severity & FD**
    - https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250130ConferenceCall_draft.pdf
  - M-000054-1 pilot batch too severe with two 940 results. **Lab A & G match severity & FD**
    - https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250409ConferenceCall.pdf
  - M-000054-2 too severe with a 931 and 1011-1 result. **Lab A & G match severity & FD**
    - https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250520ConferenceCall.pdf
  - M-000054-2a **fuel dilution study at Lab A shows 15% FD**
    - https://www.astmtmc.org/ftp/docs/gas/sequencev/minutes/VMinutes20250616%20ConferenceCall.pdf
  - M-000054-3 pilot batch row 1. **Lab A goes down in FD, Lab G & D go up in FD**
    - 20250714 meeting
  - M-000054-3 big batch row 2.
    - **Lab A averages 12.7% mild results, Labs G & D average 16.7% on-target results**
    - 20250819 meeting

intertek Total Quality. Assured.		Oil	AES	Yi	RCS	Yi	AEV	Yi	APV	Yi	OSCR	FD AVG	Oil Add
Pilot Blend Test	G	1011-1	8.71	0.491	9.42	-0.08	9.47	0.19	9.08	0.25	2	15.90	793
	D	931	7.92	-0.133	9.13	-0.643	8.7	-0.9	7.94	-0.683	80	15.60	925
	A	931	8.84	1.4	9.38	-1.236	9.04	0.233	8.12	-0.383	1	12.10	730
Final Blend	D	1011-1	8.75	0.561	9.46	-0.451	9.43	0	8.64	-0.667	6	16.40	
	G	1011-1	8.3	-0.228	9.4	0.097	9.68	1.19	9.24	0.583	2	16.69	500
	A	931	9.12	1.87	9.3	-1.02	9.02	0.17	8.22	-0.22	1	12.30	
	A	1011-1	9.47	1.82	9.6	-2.01	9.52	0.43	8.96	0.42	1	13.00	
	G	931	7.87	-0.217	8.86	-0.17	8.9	-0.233	7.64	-1.183	65	16.86	940
			avg	0.6955		-0.68913		0.135		-0.23538			

- **Lab paused the matrix to understand lab bias that has persisted for years**

Fuel Dilution		
Lab A	Lab G	Notes
12.7%	16.8%	**Average of M-000054-3 Row 2**
18.2%	11.4%	**Labs trade Run 3 engines** - Comparable blowby values at ~66 L/min. - Comparing blowby carts made no difference
-	13.0%	**Swap intake manifold & injectors** - Injector flow and spray test acceptable
15.8%	12.3%	**Swap assembled cylinder heads + head gasket**

  a. The group narrowed the conversation to three distinct parameters
    i. Piston to Bore clearance
      1. G > D >> A , all within specification
    ii. Surface Finish
      1. Various differences, needs further discussion
        a. Ra: D > G > A
        b. CV: G > D >> A
    iii. Something not captured in the data

- Today's meeting
  a. Actions:
    i. Round robin to understand how measurement methods and tools could be impacting the results
      1. Lab G's pistons measure large
      2. Lab G's engine experienced larger increase in piston to bore
    ii. Measure deck height differences
    iii. Measure the same piston with each lab's measurement equipment
    iv. Ford to meet with their surface expert before Friday's follow-up meeting
  b. Notes
    i. A has 4 stands
    ii. B has 1 stand
    iii. D has 2 stands
    iv. G has 4 stands
    v. After fuel approval, the SP should expect an additional 6 data points from the stands not in the matrix
  c. Lab call follow-up planned for Friday, September 19th at 11 AM EST
  d. Surveillance Panel call planned for Monday, September 22nd at 9 AM EST