

Sequence VH O&H Meeting
December 17th, 2025 at 2:00 PM EST via MS Teams

Attendees: Dylan Beck, Al Lopez, Pat Lang, Christian Exposito, Tony Catanese, Ben Maddock

Overview:

1. Hardware
 2. Operation
 3. Fuel
 4. Other
-

1. Hardware

- a. Inventory Life
 - i. Lab A = *inventory check not yet complete*
 - ii. Lab B = ~2030
 - iii. Lab D = ~2030
 - iv. Lab G = ~2028

- b. Al Lopez clip from ACC data:

VH Historic		
2015 - 2025	Tests Ran	AVG/yr
Candidate Tests	1227	122.7
Reference Tests	350	35
Non Registered	50	5
	1627	162.7
# of blocks	406.75	40.675

- c. Bishop (Adrien Ramirez) has blocks available
 - i. Concerns around the consumables (pumps, bearings, valves, rockers, chains, guides, gaskets, injectors, etc)
- d. Backorder on timing chain guides
 - i. Lab G found a work around thanks to Rob Zdrodowski
 - ii. 4R3Z6M256CC / 4R3E6M256CC – GUIDE

2. Operation

- a. Tightened piston to bore clearance
 - Current: 0.020 to 0.046 mm
 - Proposed 0.030 to 0.038mm, average of all eight cylinders
- i. Group agreed to hold on any motions to the procedure until the report form update is complete and labs have had a chance to review. Gentlemen's agreement to target the proposed spec but no requirements to while we're in the transition period.

- b. Report form update in progress with TMC
- Dylan Beck working to complete with some additional revisions to include averaged values, taper and out of round. This should expedite future analysis efforts

Cylinder Bore Measurements (mm)										
Cylinder	Transverse				Longitudinal				Out of Round	Piston to Bore
	Top	Middle	Bottom	Taper	Top	Middle	Bottom	Taper		
1										
2										
3										
4										
5										
6										
7										
8										
AVG										

Cylinder Surface Finish Measurements							
Cylinder	Ra (µin)	Rk (µin)	Rpk (µin)	Rvk (µin)	Rz (µin)	Mr2 (%)	Cross Vol. (µin)
1							
2							
3							
4							
5							
6							
7							
8							
AVG							

Piston Measurements (mm)									
	1	2	3	4	5	6	7	8	AVG
Piston Diameter(mm)									

Piston Ring End Gap (inches)								
	1	2	3	4	5	6	7	8
Top Ring Pre-Test								
2 nd Ring Pre-Test								

3. Fuel

- M-000054-3 additional runs (*as of 12/17/25*)
 - Lab A: One additional result expected
200603: AES 1.75 σ mild
 - Lab B: Two additional data points expected
198394: AES 1.09 σ mild (severe varnish)
 - Lab D: 1 expected in January 2026
 - Lab G:
 - 201949: AES 0.7193 σ mild
 - 199199: AES 1 σ mild
- 13 tests approved M-000054-3
 - Four additional data points now available (n=17)
 - Labs agreed early February would be a good time to review data for a potential ICF

Historical Logbook

Date	Topic	Description	Comments
2/12/24	-	O&H formed.	
2/29/24	Hardware	Cam cap anaerobic sealant	IL24-1
3/5/24	Hardware	Cam bearings resolved with King Bearing supply to TEI.	Incl. SwRI bearing analysis
3/12/24	Fuel	N-000010-1+ CofA data integrity review.	Included lab samples to Saybolt
3/26/24	Fuel	Quarterly samples now from test cell	
4/9/24	Hardware	Piston oil hole size differences by piston size not statistically significant to APV	
4/16/24	Operation	Build Workshop conducted	IL24-3 and IL24-4
5/21/24	Fuel	AO content depletion in transit	
5/21/24	Operation	Honing data analysis uninterpretable due to measurement differences	This will be revisited after 2025 fuel approval matrix
6/4/24	Hardware	OHT3G-096-1 brushes explained	IIIG efforts
7/9/24	Operation	OSCR raters group imprecision reviewed	
8/27/24	Hardware	FCS order placed on pistons and rings	
8/27/24	Operation	N-10-1 approval vs PM statistical analysis	
1/7/25	Fuel	RVP adjustments vs fuel dilution	
4/29/25	Operation	Blowby Cart Questions - 5/16" orifice	Equation difference, ~0.1 L/min
8/19/25	Hardware	2024 FCS order has completed	
9/16/25	Operation	Engine Swap experiment Lab A & G	Fuel dilution moves with build
10/28/25	Fuel	M-000054-3 fuel batch approved.	