



## Test Monitoring Center

203 Armstrong Drive, Freeport, PA 16229, USA

www.astmtmc.org  
412-365-1000

MEMORANDUM: 22-001  
DATE: January 7, 2022  
TO: Sequence V Surveillance Panel  
FROM: Richard Grundza  
SUBJECT: VH Reference Oil 1011-1 Targets

As approved during the December 20, 2021 Sequence V Surveillance Panel conference call, the targets for reference oil 1011-1 are listed in the table below. The data used to generate the targets is also attached. These targets are effective January 4, 2022. Please note that for AES and RAC the means and standard deviations are the current means for reference oil 1011-1. For AE50 and AP50, the standard deviations are the current standard deviations from reference oil 1011, and the means are the average of the severity adjusted results for AE50 and AP50. The attached table lists both the unadjusted and severity adjusted results for the AE50 and AP50 parameters only.

**VH Reference Oil 1011-1 Targets**

Parameter	Mean	Standard Deviation
Average Engine Sludge (AES)	8.43	0.57
Average Rocker Cover Sludge (ln(10-RAC))	-0.5294	0.1924
Average Engine Varnish (AE50)	9.43	0.21
Average Piston Varnish, 50% rating (AP50)	8.96	0.48

REG/reg/mem22-001.reg.docx

cc: Scott Parke  
Jeff Clark  
Sequence V Surveillance Panel  
<https://www.astmtmc.org/ftp/docs/gas/sequencev/memos/mem22-001.pdf>

Distribution: email

### Data Used to Evaluate reference oil Targets

<b>Testkey</b>	<b>ltmslab</b>	<b>ltmsdate</b>	<b>APPARATS</b>	<b>AP50</b>	<b>AP50 adjusted</b>	<b>AE50</b>	<b>AE50 adjusted</b>	<b>AES</b>	<b>RAC</b>
166475-VH	G	20211027	G3	8.58	8.69	9.26	9.23	8.35	9.52
162991-VH	G	20210923	G2	8.91	9.02	9.5	9.47	8.69	9.54
166479-VH	G	20210923	G5	8.71	8.82	9.44	9.41	8.13	9.33
165542-VH	A	20210923	A2	9.05	9.04	9.55	9.55	9.12	9.48
165541-VH	A	20211010	A5	8.73	8.72	9.2	9.2	8.33	9.44
162745-VH	D	20211012	D1	8.6	8.82	9.4	9.6	7.96	9.44
161669-VH	G	20211023	G1	9.08	9.19	9.55	9.52	8.15	9.36
163350-VH	A	20211121	A3	9.38	9.37	9.46	9.46	9.05	9.44