

GMOD Conference Call Minutes 3pm April 14, 2016

1. Tim Cushing will be leading GMOD, replacing Bruce Matthews.

2. GMOD to replace IIIG on June 1
 - GM will not accept IIIG results from tests registered after May 31.
 - CQA will send out formal communication.
 - Labs are required to complete 1 test on reference oil assigned by TMC to re-qualify stand used in precision matrix.
 - TMC is ready to provide reference oil assignments for re-qualification.
 - TMC will be ready for data upload by May 1.
 - Once lab has re-qualified, it can start candidate testing immediately.
 - Only GMOD results from re-qualified stands will be accepted for dexos approval.
 - During the period until June 1, either IIIG or GMOD results will be accepted by GM.
 - IIIG results will not have an expiration date.

3. GMOD Limits

GM Oxidation and Deposit Test GMW17043	Viscosity Increase at 100 h	%	≤ 100
	Average Weighted Piston Deposits	Merit	≥ 5.2 (under new weighting system)
	Average Groove 3 Deposits	Merit	> 9.0
	Average Piston Skirt Varnish	Merit	> 9.0
	Hot Stuck Rings	Number	None
	Oil Consumption	L	Report
	Cold Cranking Simulation (CCS) Viscosity (ASTM D5293)	mPa·s	0W-XX: Report at -35 °C 5W-XX: Report at -30 °C
	Low Temperature Pumping Viscosity (no yield stress) (ASTM D4684)	°C	Report
		mPa·s	Meet requirement of original grade or next higher grade depending on results of ASTM D5293
Phosphorus Retention	%	≥ 79	

New piston deposit weighting scale

Groove1	Groove2	Groove3	Land2	Land3	UnderCrown	SktVar_Thr	SktVar_AntiThr
0.071	0.143	0.000	0.214	0.429	0.143	0.000	0.000

4. Test Monitoring System completed

- Document can be accessed at <https://dexostrc.org/reference>. Select *Information Letters* and *GMOD* under Choose Filter. Select *GMOD information Files*.
- Stand based system.
- Reference period is 15 tests or 120 days, whichever occurs first.
- Requested changes proposed by the labs have been adopted.
 - However, did not include use of reference oil for stand shakedown.
- Under valid test definition, added maximum of 3 unscheduled restarts.
- Currently same 4 control charts as IIIG.
 - PVIS, WPD, and phosphorus retention are charted.
 - Only PVIS and WPD will affect stand status.
 - No use of severity adjustments is planned.
- Project underway with university to investigate use of other control charts types.
 - Charts may change based on recommendations.
- Reference oil mean and standard deviation are included in document.
 - Targets will be updated as more data become available (every 20 tests).

5. BOI/VGRA guidelines

- BOI not permitted – test must be run on final formulation.
- VGRA read-across is permitted if the following two conditions are met for the tested formulation:
 - PVIS is < 44.0% and WPD is > 6.0
 - For allowable viscosity grade read across, use API 1509, Appendix F.
 - When using Table F-1, the provision in Note 4 is not permitted.
- Latest rules are available at <https://dexostrc.org/bulletin.aspx>.

6. GMW specifications

- Updated dexos 1™ specification (GMW17332) containing GMOD limits will be available from IHS online in about 1 month at <https://www.ihs.com/products/gm-standards.html>.
- GMOD procedure (GMW 17043) is now available.

7. Test component supply

- All critical components are available in stock from GM and OHT to support 6 test runs per engine block.

8. Reference oil supply

- Reference oils are available from TMC and will be assigned evenly among the 3 oils.

9. Engine assembly and test stand manuals

- Latest versions of both manuals will be available at <https://dexostrc.org/reference>. Select *Information Letters* and *GMOD* under Choose Filter. Select *GMOD information Files*.

- Latest version of Build Manual is 2/15/16.
- Latest version of Test Stand Manual is 12/21/15.

10. GMOD group forum

- GM will chair the group.
 - Anyone from industry can participate.
 - Group will not report to ASTM.
- Initially monthly conference calls will be held.
- Once the test is established, semi-annual calls will be held or as needed.

Submitted by Andrew Buczynsky, 4/15/16