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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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Issued: January 26, 2012

Reply to: Dan Worcester
Southwest Research Institute
6220 Culebra Rd.
San Antonio, TX 78238
Phone: 210.522.2405
Fax: 210.684.7523
Email: dworcester@swri.org

These are the unapproved minutes of the 01.23.2012 Sequence VI Surveillance Panel Conference Call.

The meeting was called to order at 9:00 AM by Chairman Charlie Leverett.

Agenda

The Agenda is the included as Attachment 1.

1.0 Roll Call

The Attendance list Attachment 2.

2.0) Approval of minutes

2.1) Approval of the minutes of the 01.10.2012 Conference Call.

Motion – Accept the minutes of the 01.10.2012 VID SP CC. Unanimous. Charlie Leverett, Rich Grundza second.

3.0) Action Item Review

3.1 OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **Will be on-going.** There are 46.

3.2 Labs will review to see if the same data files as requested 11/30/11 on the 2012 engines can be supplied on one recent or future reference test for comparison. This is complete.

3.3 GM will report on its findings regarding the failed SwRI engine to the SP when available. This will be available later.

3.4 GM to send 2012 engine to Lubrizol in 2011 and send Afton a 2012 engine toward mid-January 2012. Lubrizol is running break in, Afton is installing gears.

3.5 GM to report to the SP what the last date of purchase for 2012 LY7 engines at the next SP meeting. The last date is 04.15.2012.

3.6 Rich Grundza will ask the reference oil suppliers whether they would allow the oil analysis tests mentioned above to be run on their reference oils. It is acceptable to analyze oil. Charlie will send an email for this effort.

3.7 Engine Build Task Force will review build options for the current VID engines. This group is on hold for more data on the running 2012 engines.

4.) <u>Old Business</u>

4.1) There is no old business**.**

5.) New Business

5.1 Review outcome of the first two tests on RO-542 and determine if we should run additional reference oils.

5.1.1 There was considerable discussion on this topic.

5.1.2 The big question is how much data is needed for the industry to make a decision on purchasing the 2012 engines for future VID testing. IAR and SwRI feel this engine will provide acceptable response and separation of oils.

5.1.3 A matrix will be required to develop the engines once stand improvements are completed.

5.1.4 OHT will send out a survey to determine the number of 2012 engines needed by labs.

5.1.5 IAR and SwRI will complete the 1010 runs on their current engines.
5.1.5 GM will check to see if the cam gears could be installed during assembly.

5.2 Dave's comments on his operational data study.
5.2.1 Discussion is that the oil lines per the procedure, either size 8 or 10 restrict the oil flow on the VID engine.
5.2.2 There are also differences in coolant circulation.
5.2.3 Charlie recommends no changes and hold these changes for GF-6.
5.2.4 Dave Glaenzer will be the Chair of a Task Force for stand improvements.
5.2.5 His presentation is Attachment 3.

5.3) The SP needs to determine if the Engine Build Task Force needs to be re-activated and when.

6.) Next Meeting
At the call of the chairman, after SwRI and IAR complete their 541 reference runs.

7.) Meeting Adjourned
The meeting adjourned at 9:37 AM.
Charlie Leverett, Rich Grundza second.

Sequence VI Surveillance Panel conference Call
January 23 @ 09:00 CST
Call in #: 800-391-9177
Pass Code: 4875645502

Agenda

1.0) Roll Call

2.0) Approval of minutes

2.1) Approve the minutes from the 01/10/2012 Sequence VI Surveillance Panel conference call.

3.0) Action Item Review

3.1 OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **46 as-of 01/10/12**

3.2 Labs will review to see if the same data files as requested 11/30/11 on the 2012 engines can be supplied on one recent or future reference test for comparison. **Done**

3.3 GM will report on its findings regarding the failed SwRI engine to the SP when available.

3.4 Update from Lubrizol and Afton on their 2012 engines.

3.5 GM to report to the SP what the last date of purchase for 2012 LY7 engines. **Stated as March on 01/10/12**

3.6 Rich Grundza will ask the reference oil suppliers whether they would allow the oil analysis tests mentioned above to be run on their reference oils. **As-of 1/10/12 TMC still needed one response from oil supplier.**

3.7 Engine Build Task Force will review build options for the current VID engines. **We will discuss in detail in "New Business".**

4.) Old Business

4.1) None

5.) New Business

5.1 Review outcome of the first two tests on RO541 and determine if we should run additional reference oils.

5.2 Dave’s comments on his operational data study.
5.3)The SP needs to determine if the Engine Build Task Force needs to be re-activated and when.

6.) Next Meeting

Call of the chairman

7.) Meeting Adjourned

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance
Bowden, Jason Voting Member	OH Technologies, Inc. P.O. Box 5039 Mentor, OH 44061-5039	Phone: 440-354-7007 Fax: 440-354-7080 dhbowden@ohtech.com	Present with Dwight and Matt
Bruce Matthews Voting Member	GM Powertrain Engine Oil Group Mail Code: 483-730-472 823 Joslyn Rd	Pontiac, MI 48340: 248-830-9197 bruce.matthews@gm.com	Present with Matt, Don, Eric and Kevin
Andy Ritchie Voting Member	Infineum 1900 East Linden Ave. Linden, NJ 07036-0735	Phone: 908-474- Fax: 908-474-3637	Gordon proxy for Andy; Buck
Ron Romano Voting Member	Ford Motor Company 21500 Oakwood Blvd POEE Bldg Rm DR 167 MD 44 Dearborn, MI 48121-2053	Phone: 313-845-4068 rromano@ford.com	
Leverett, Charlie Voting Member	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	Phone: 210-647-9422 Fax: 210-523-4607 charlie.leverett@intertek.com	Present
Grundza, Rich Voting Member	ASTM TMC 6555 Penn Ave. Pittsburgh, PA 15206-4489	Phone: 412-365-1034 Fax: 412-365-1047 Dml@tmc.astm.cmri.cmu.edu	Present
Miranda, Timothy Voting Member	BP Castrol Lubricants USA 1500 Valley Road Wayne, NJ 07470	Phone: 973-305-3334 Timothy.Miranda@bp.com	
Mosher, Mark Voting Member	ExxonMobil 600 Billingsport Road Paulsboro, NJ 08066	Phone: 856-224-2132 Fax: 856-224-3628 mark_r_mosher@exxonmobil.com	Present
Caudill, Timothy Voting Member	Ashland, Inc. 21st and Front Streets Ashland, KY 41101	Phone: 606-329-5708 Fax: 606-329-3009 Tlcaudill@ashland.com	
Dan Worcester Voting Member	Southwest Research Institute (SwRI) 6220 Culebra Road San Antonio, TX 78228	Phone: Fax: dan.worcester@swri.org	Present with Bill
Szappanos, George Voting Member	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347- Fax: 440-347-4096 George.Szappanos@lubrizol.com	Jerry Brys proxy for George; Chris
Glaenzer, David Voting Member	Afton Research Center 500 Spring Street Richmond, VA 23218	Phone: 804-788-5214 Fax: 804-788-6358	Present with Todd and Bob
Sutherland, Mark Voting Member	Chevron Oronite Company LLC 4502 Centerview Ste. 210 San Antonio, TX 78228	Phone: 210-731-5605 Fax: 731-5621 msut@chevrontexaco.com	Jo proxy for Mark
Robert Stockwell Voting Member	ConocoPhillips Lubricants R&D Passenger Car Engine Oil	office 580-767-6894 Robert.T.Stockwell@conocophillips.com	Present
Tracy King Voting Member	Chrysler	Phone: 248-576-7500 tek1@chrysler.com	
Teri Kowalski	Toyota	teri.kowalski@tema.toyota.com	

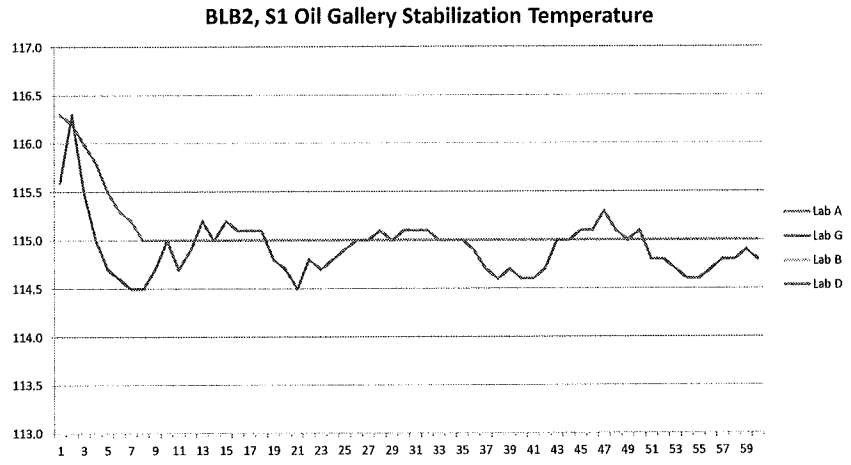
Comparison of Stabilization Data

BLB2 & 16 Hour

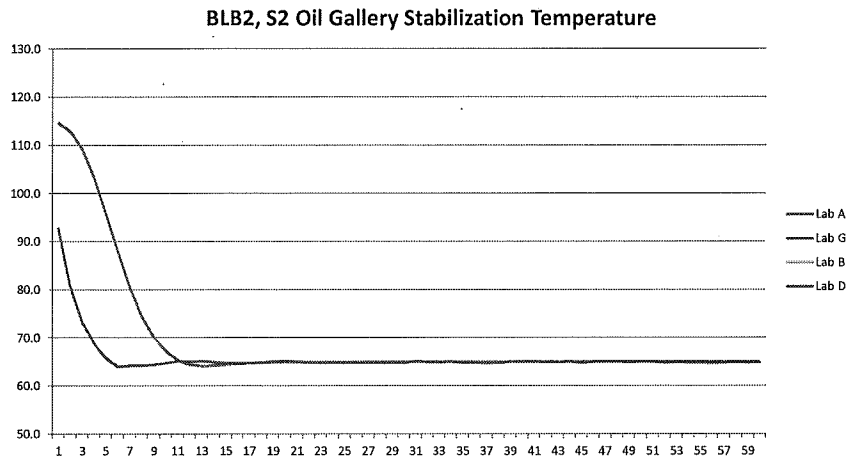
RO 542

Labs A & G

Some instability of temperature exists during stabilization at Lab G.

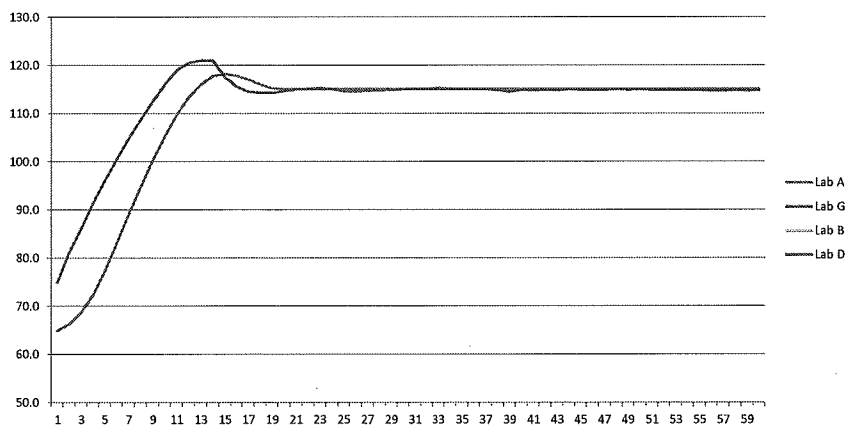


Lab G cools oil to Stage 2 set point twice as fast as Lab A.



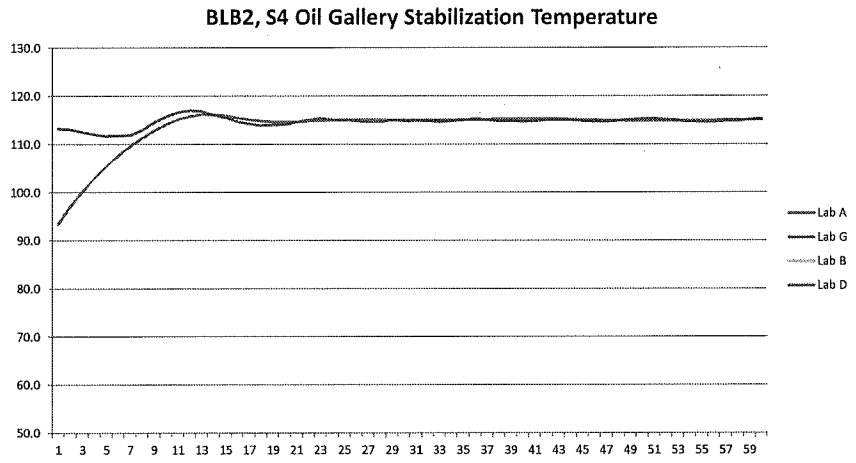
RO 542 Stabilization Data 3

Slight overshoot of set point by both labs.



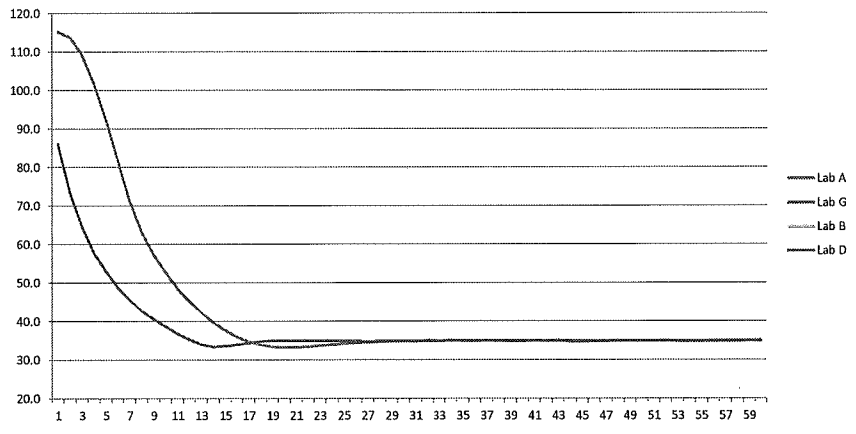
RO 542 Stabilization Data 4

Lab A drops to ~94°, was at 115° at end of prior stage. ??



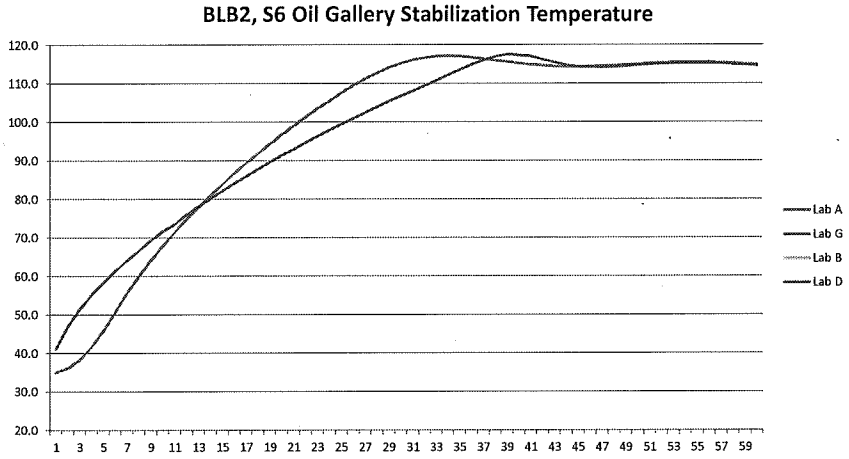
RO 542 Stabilization Data 5

Lab G cool down to set point is faster.



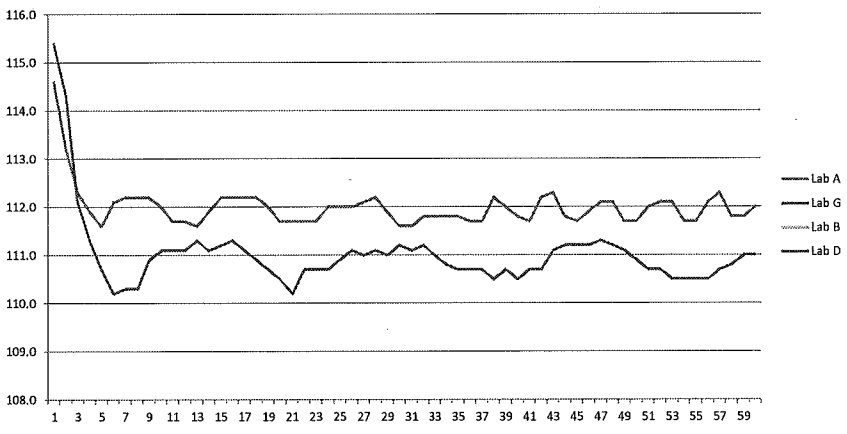
RO 542 Stabilization Data 6

Lab A heats to set point quicker



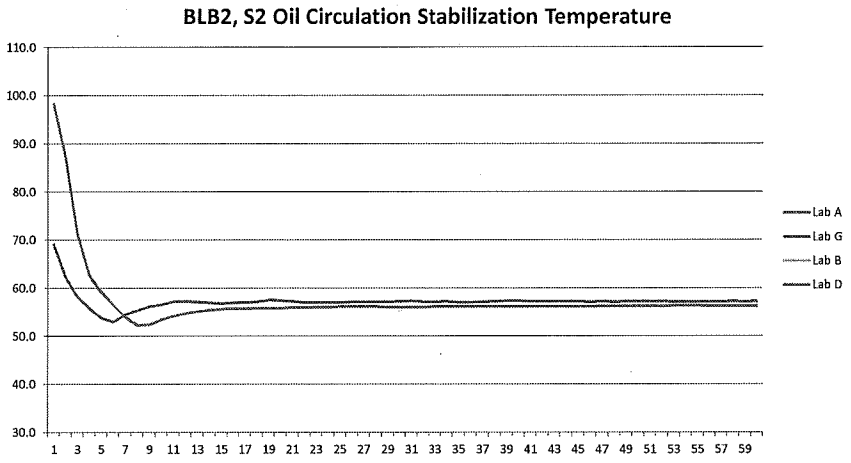
RO 542 Stabilization Data 7

Significant differences exist with Oil Control Temperate (oil into pan).



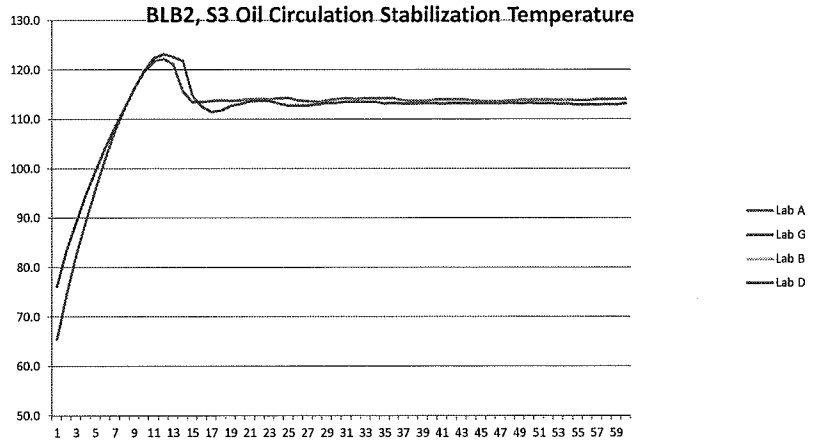
RO 542 Stabilization Data 8

Significant differences exist with Oil Control Temperate (oil into pan).



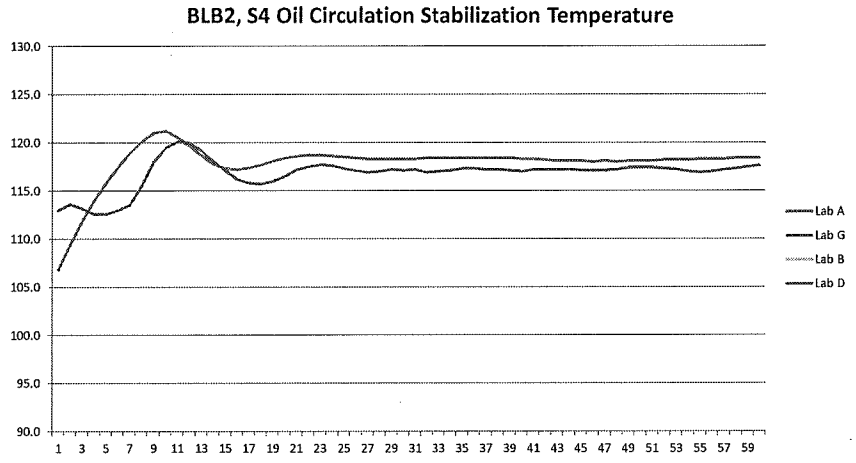
RO 542 Stabilization Data 9

Significant differences exist with Oil Control Temperate (oil into pan).

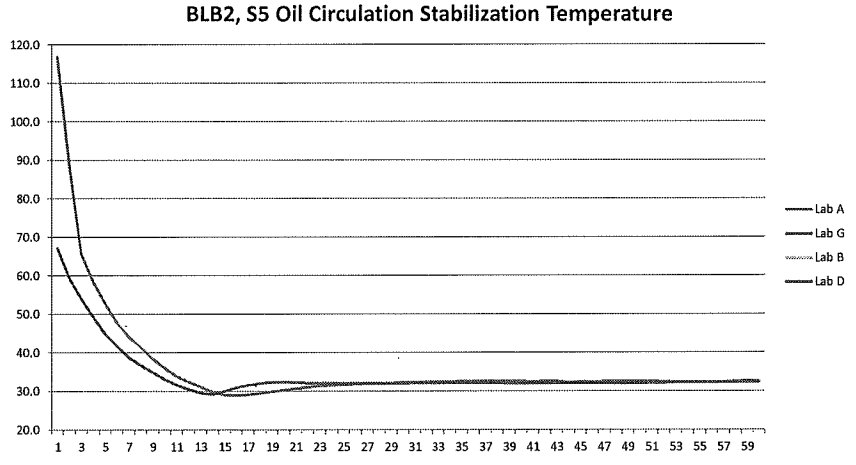


RO 542 Stabilization Data 10

Significant differences exist with Oil Control Temperate (oil into pan).

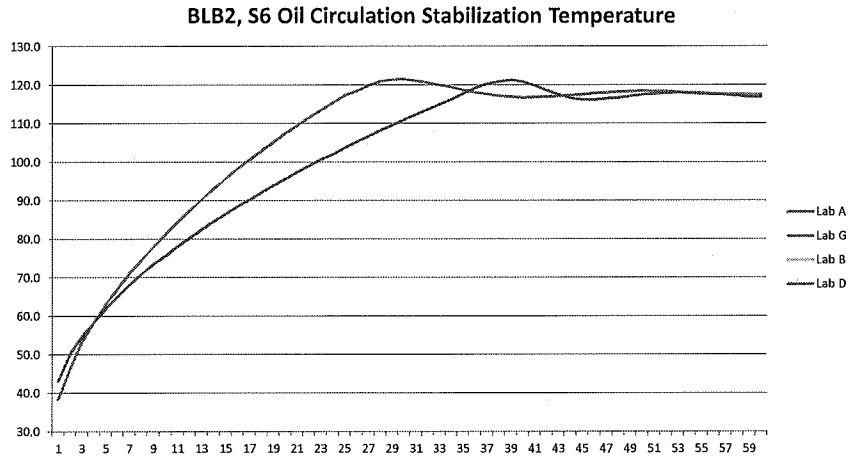


RO 542 Stabilization Data 11



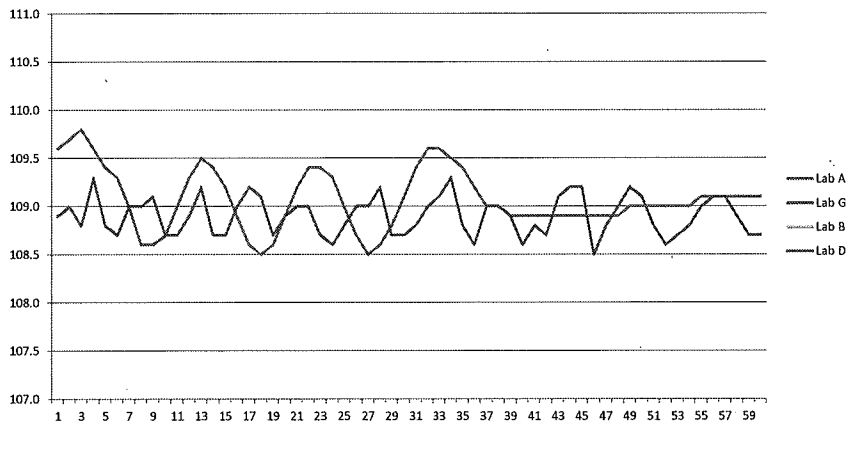
RO 542 Stabilization Data 12

Lab A heats to set point faster.



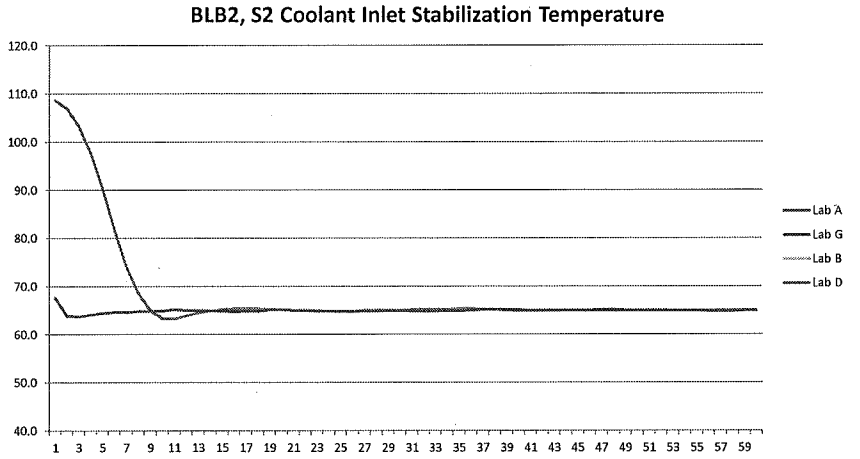
RO 542 Stabilization Data 13

Both labs somewhat unstable.



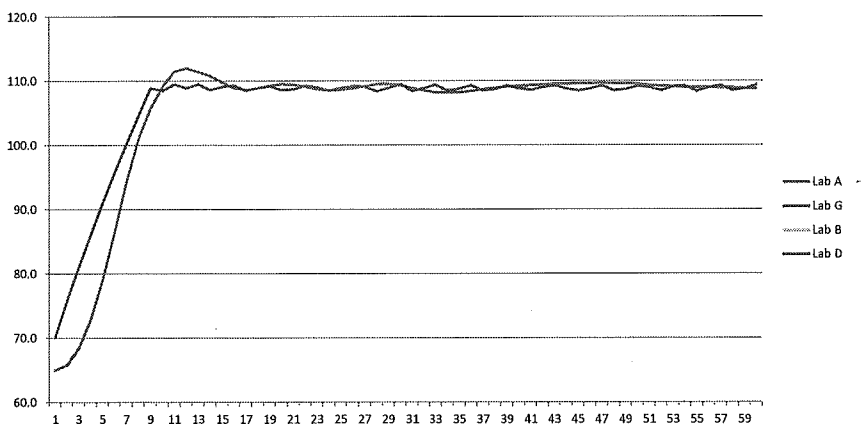
RO 542 Stabilization Data 14

Lab G cools to set point much quicker.



RO 542 Stabilization Data 15

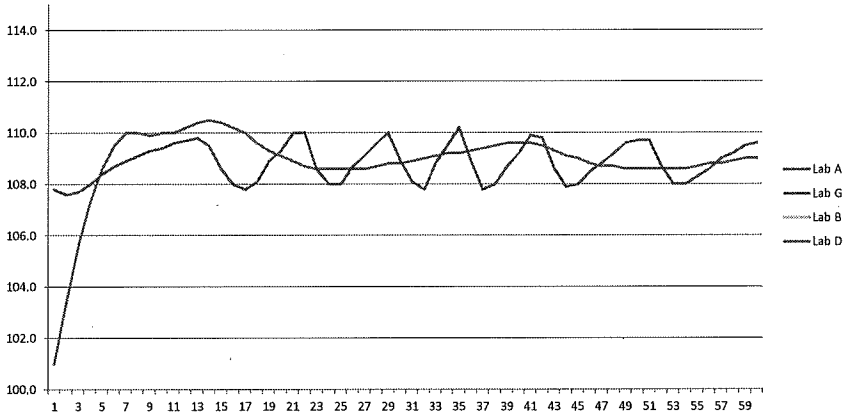
Labs similar.



RO 542 Stabilization Data 16

Both labs unstable.

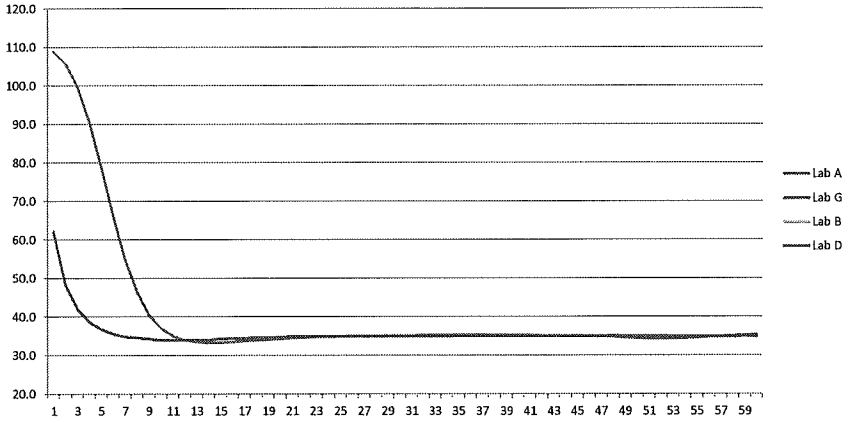
BLB2, S4 Coolant Inlet Stabilization Temperature



RO 542 Stabilization Data 17

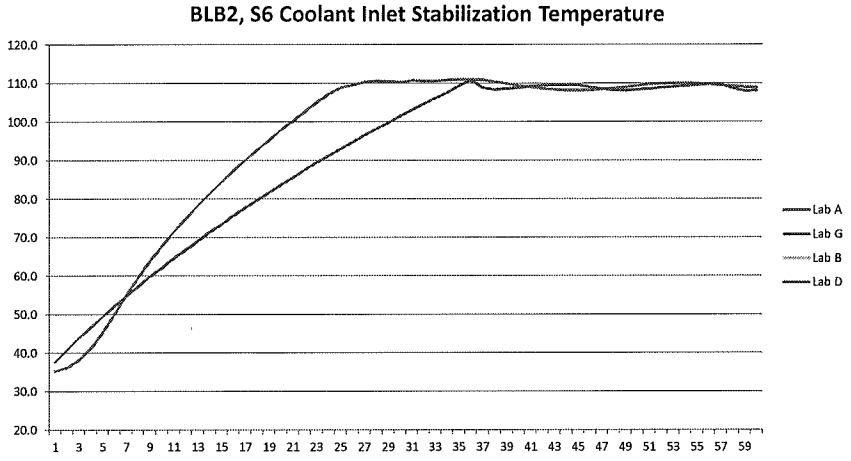
Lab G cools to set point faster.

BLB2, S5 Coolant Inlet Stabilization Temperature



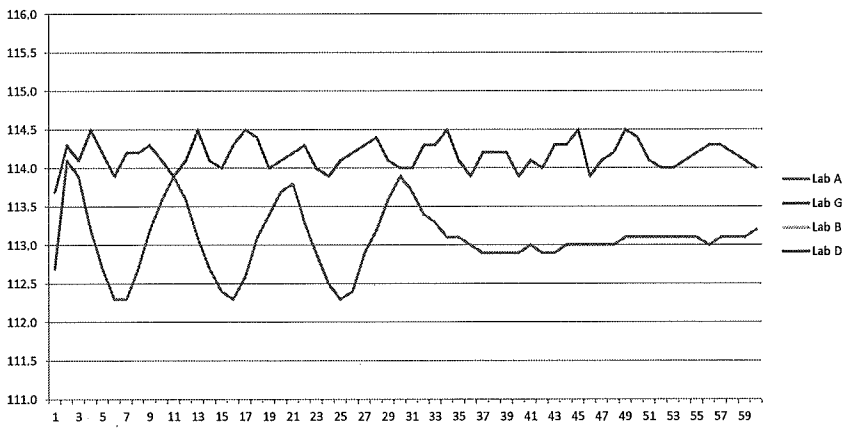
RO 542 Stabilization Data 18

Lab A heats to set point faster.



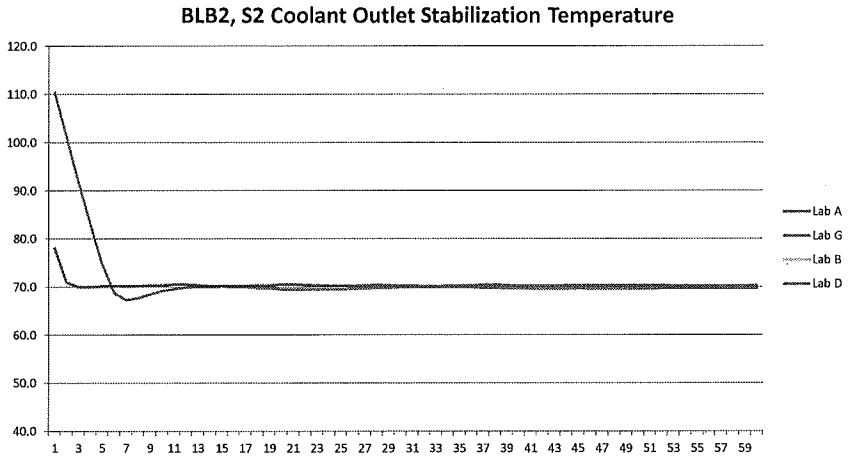
RO 542 Stabilization Data 19

Significant difference in Coolant Outlet Temperature between Labs A & G.



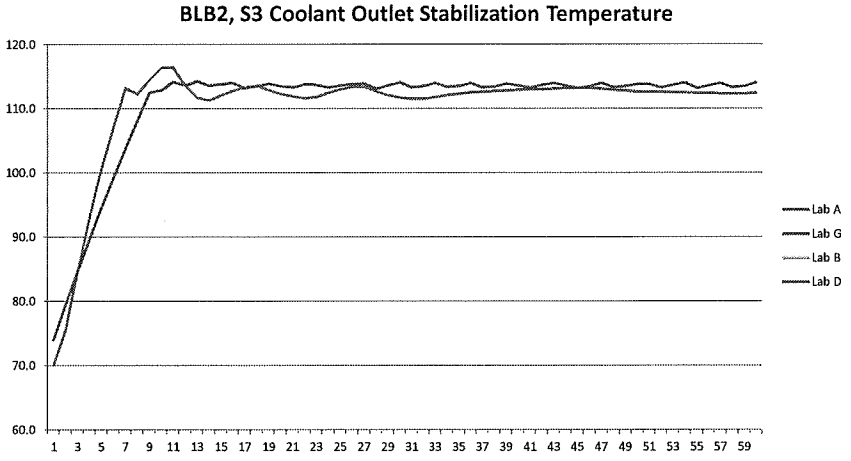
RO 542 Stabilization Data 20

Significant difference in Coolant Outlet Temperature between Labs A & G.



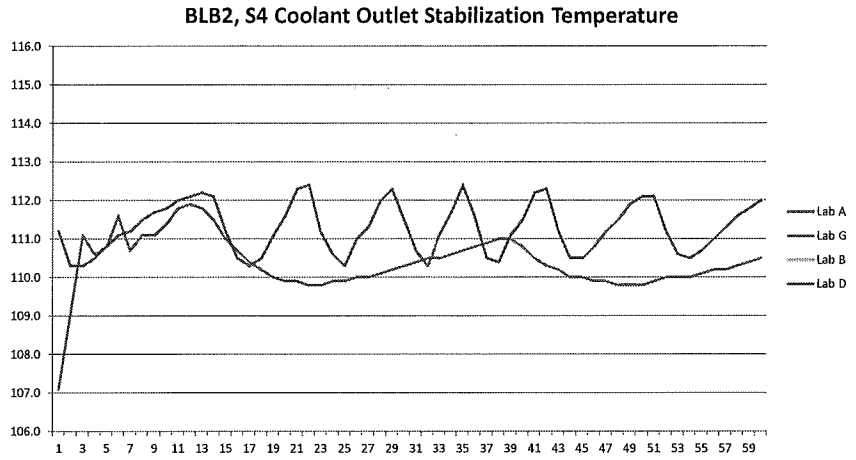
RO 542 Stabilization Data 21

Significant difference in Coolant Outlet Temperature between Labs A & G.



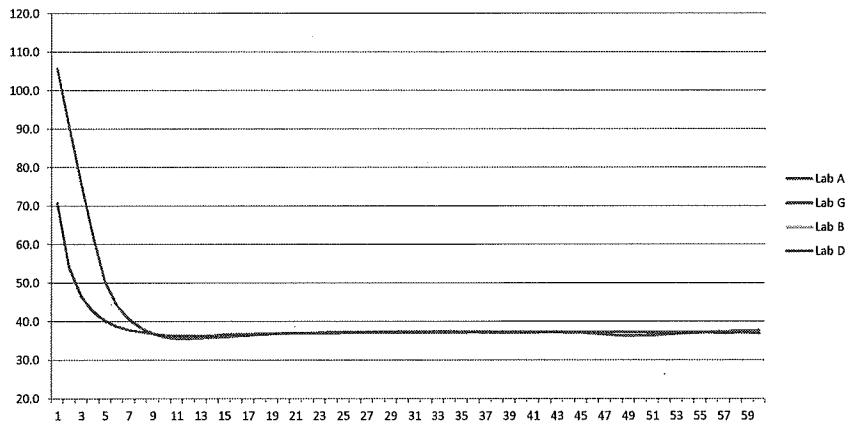
RO 542 Stabilization Data 22

Significant difference in Coolant Outlet Temperature between Labs A & G. Bot lab unstable.



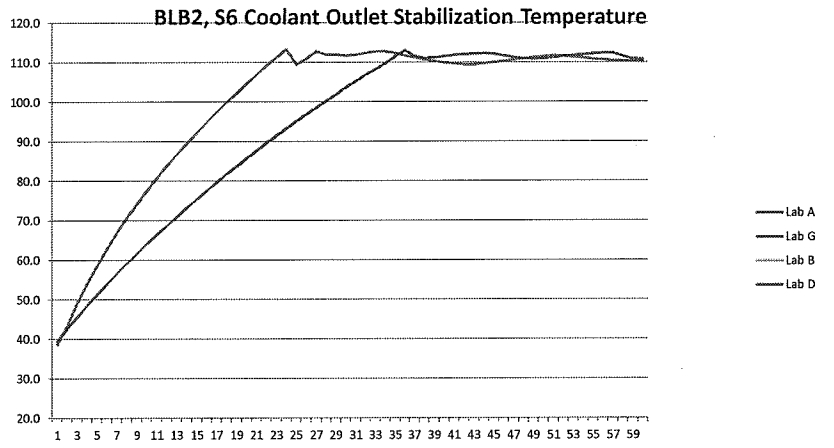
RO 542 Stabilization Data 23

Labs similar.



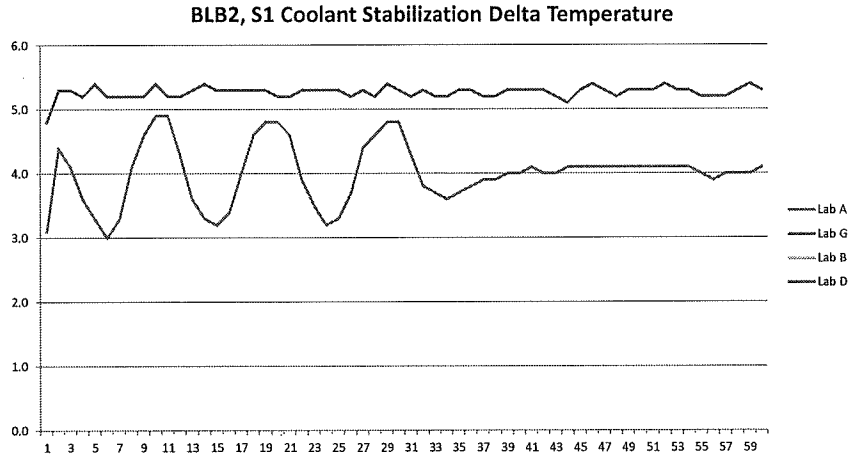
RO 542 Stabilization Data 24

Significant difference in Coolant Outlet Temperature between Labs A & G.



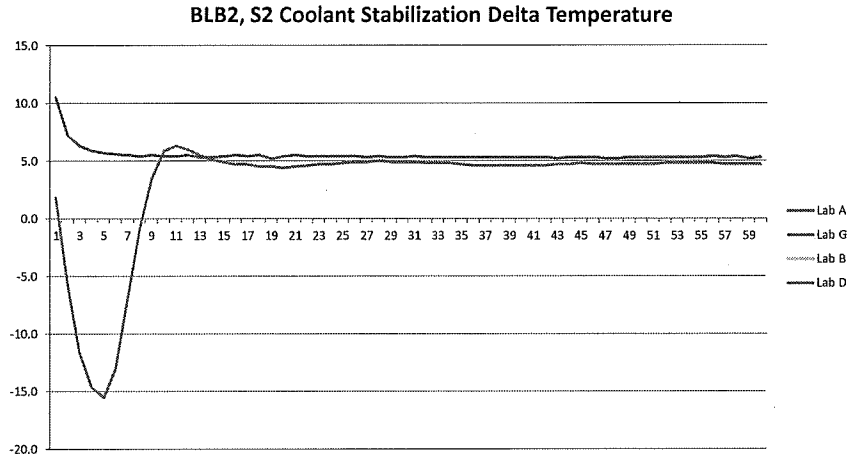
RO 542 Stabilization Data 25

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.



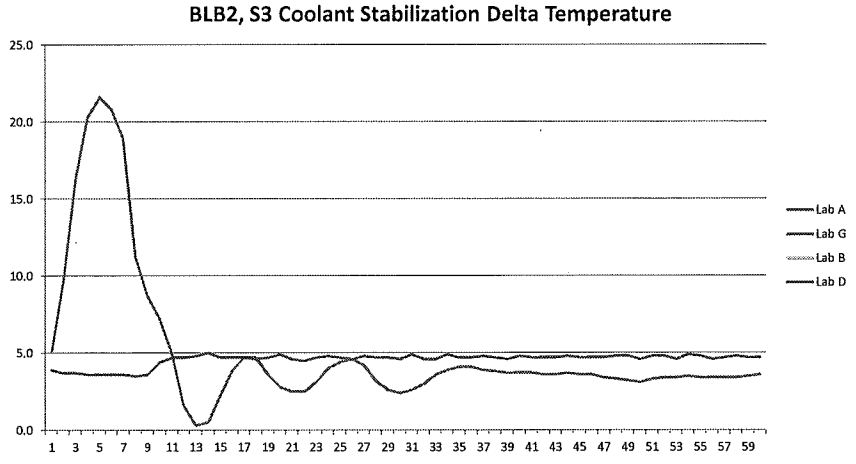
RO 542 Stabilization Data 26

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.
Unable to understand how Lab A can have negative coolant delta.



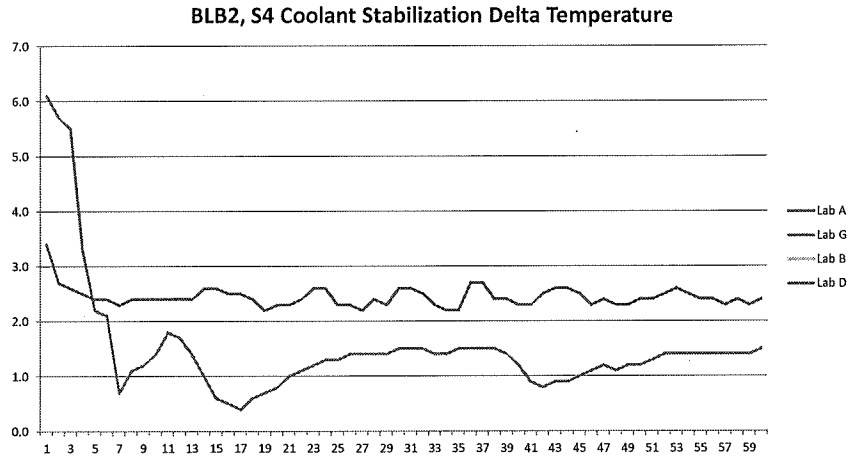
RO 542 Stabilization Data 27

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.



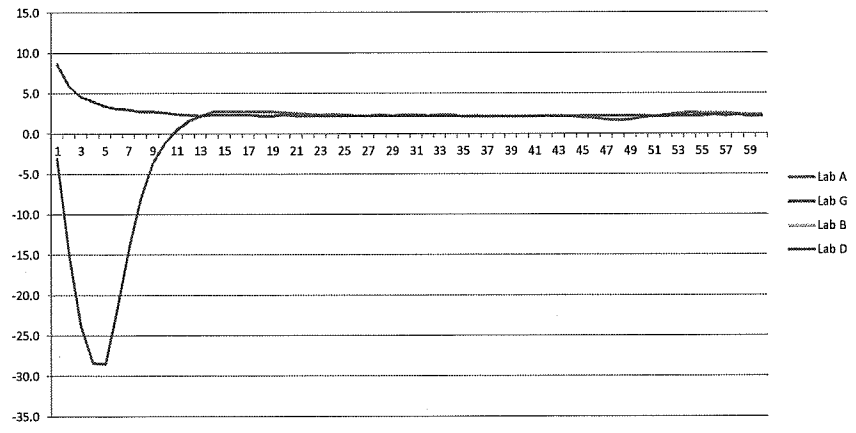
RO 542 Stabilization Data 28

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.



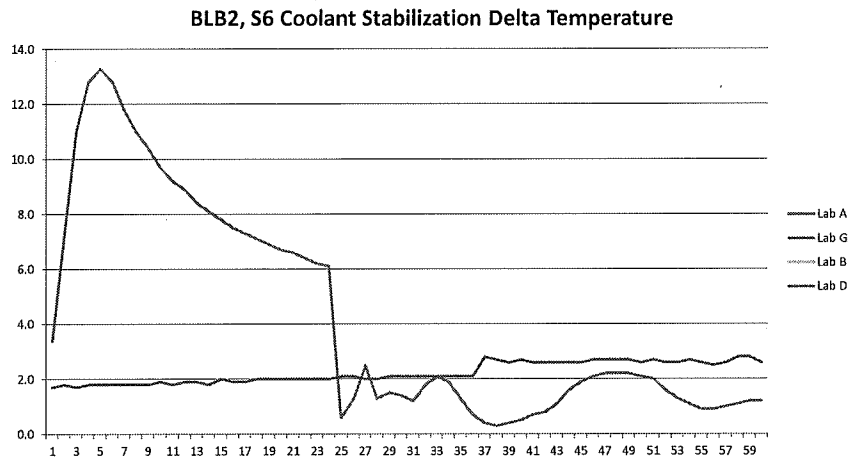
RO 542 Stabilization Data 29

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.
Unable to understand how Lab A can have negative coolant delta.



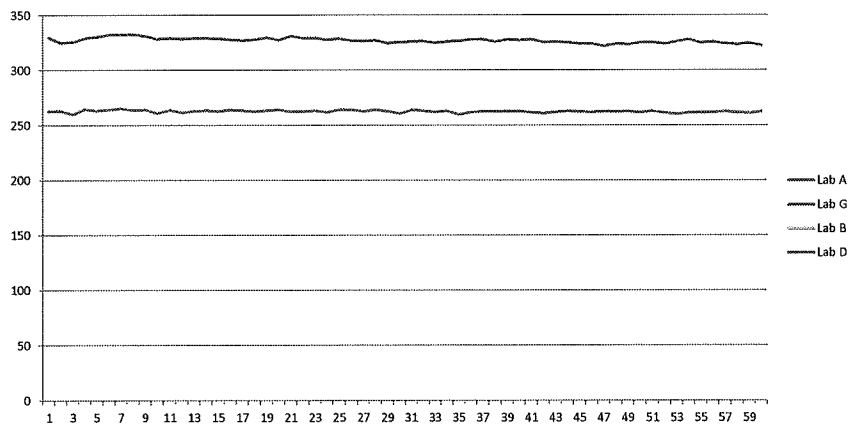
RO 542 Stabilization Data 30

Delta Temperature (Coolant Outlet minus Coolant Inlet). Same observations as Coolant Outlet Temperature graphs.
Unsure as to what is going on with Lab A.



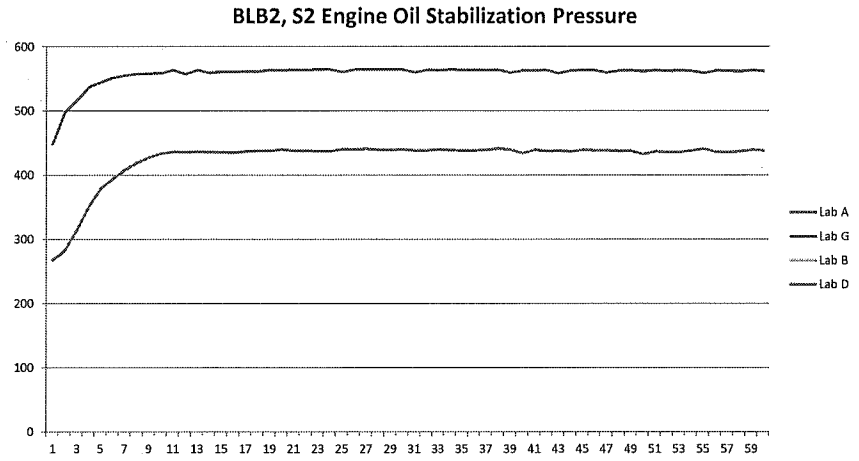
RO 542 Stabilization Data 31

Lab G ~65 kPa higher.



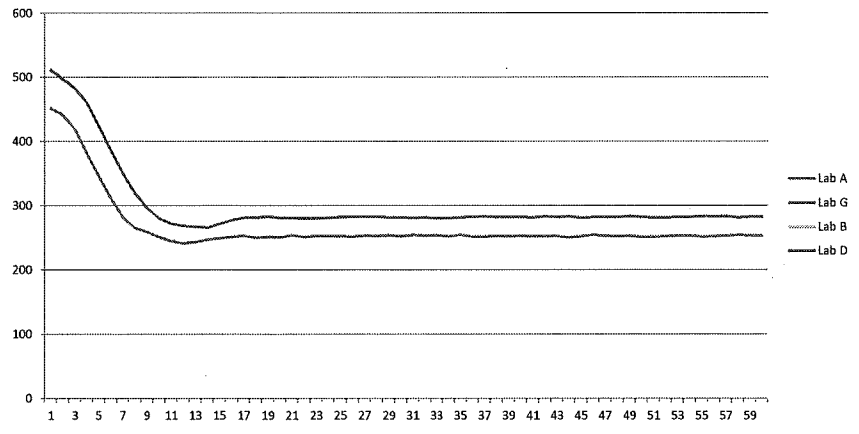
RO 542 Stabilization Data 32

Lab G ~125 kPa higher.



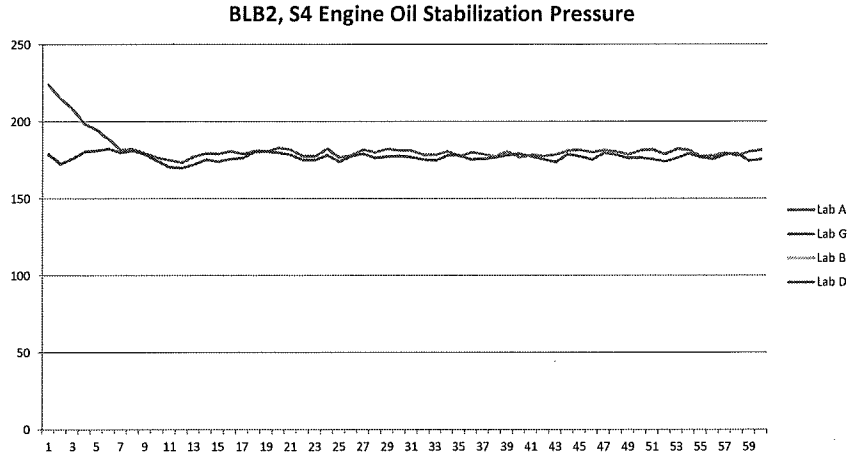
RO 542 Stabilization Data 33

Lab G ~ 30 kPa higher.



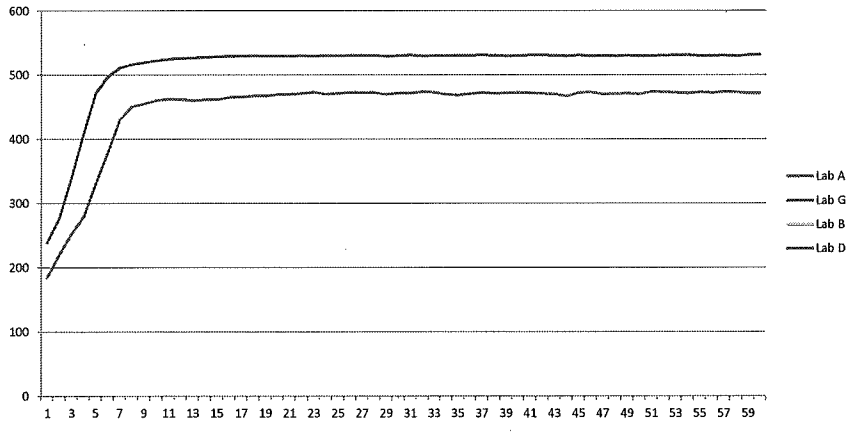
RO 542 Stabilization Data 34

Lab G slightly (~5 kPa) higher.



RO 542 Stabilization Data 35

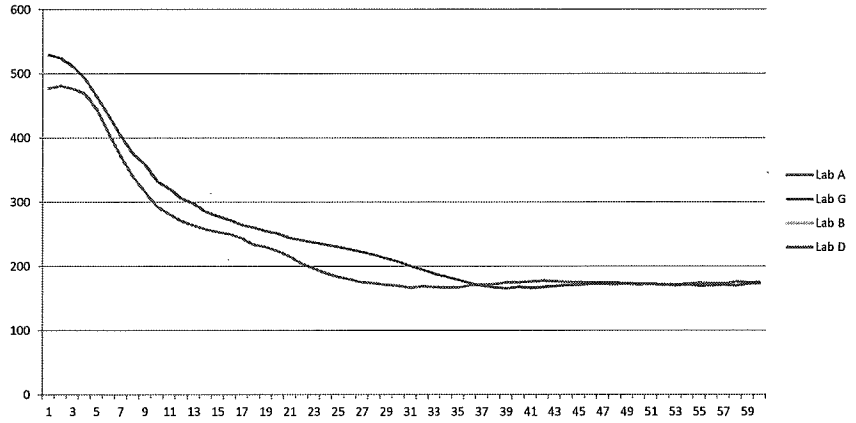
Lab G ~55 kPa higher.



RO 542 Stabilization Data 36

Labs similar.

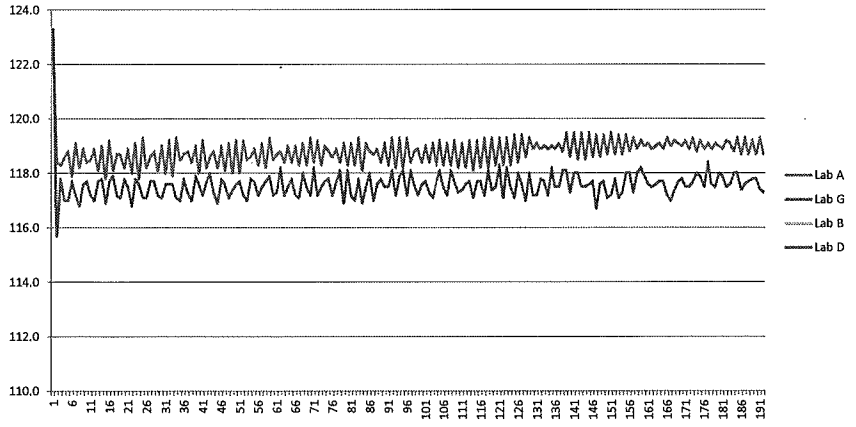
BLB2, S6 Engine Oil Stabilization Pressure



RO 542 Stabilization Data 37

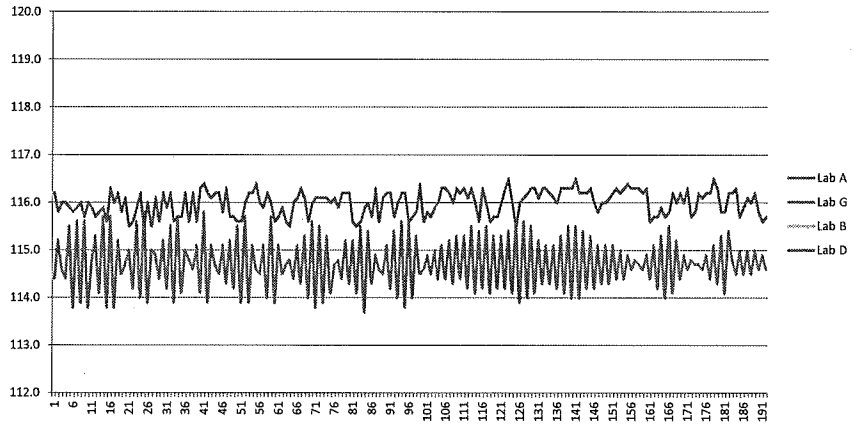
Lab A is ~1.2° higher than Lab G

16 Hour Aging Oil Circulation Temperature



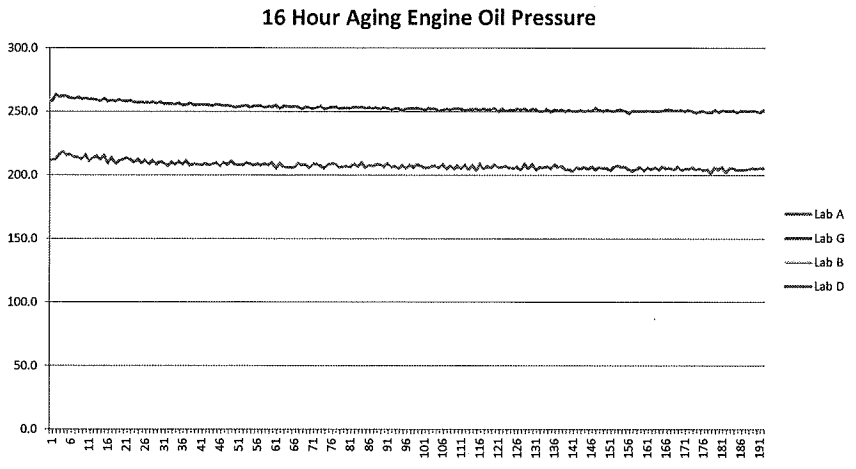
RO 542 Stabilization Data 38

Lab G is ~1.3° higher than Lab A



RO 542 Stabilization Data 39

Lab G is ~65 kPa higher than Lab A



RO 542 Stabilization Data 40