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### Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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*Second Vice-Chairman:* JANET L. LANE, ExxonMobil Research & Engrg., 600 Billingsport Rd, Paulsboro, NJ 08066-0480 (856) 224-3302, Fax: (856) 224-3616, e-mail: [janet.l.lane@exxonmobil.com](mailto:janet.l.lane@exxonmobil.com)  
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*Second Secretary:* MICHAEL A. COLLIER, Petroleum Analyzer Co. LP, PO Box 206, Wilmington, IL 60481, (815) 458-0216, Fax: (815) 458-0217, e-mail: [macvarlen@aol.com](mailto:macvarlen@aol.com)  
*Staff Manager:* DAVID R. BRADLEY, (610) 832-9681, Fax: (610) 832-9668, e-mail: [dbradley@astm.org](mailto:dbradley@astm.org)

December 03, 2012

Reply to:

Larry Hamilton

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Wickliffe, Ohio 44092

(440) 347-2326

[Larry.hamilton@lubrizol.com](mailto:Larry.hamilton@lubrizol.com)

ASTM D02.B0.03 L-60-1 Surveillance Panel

Members and Guests:

Attached for your review and comments are the unconfirmed minutes of the November 7, 2012

L-60-1 Surveillance Panel meeting held at Automation Alley; Troy, MI

Please direct any corrections or comments to my attention.

Sincerely,

Larry Hamilton; Chairman

L-60-1 Surveillance Panel

## ASTM L-60-1 (D5704) Surveillance Panel Meeting Minutes

Automation Alley, MI

11/07/2012

**Attendees:** voting member in BOLD

AAM	J. Dharte
Afton	T. Gottwald, D. Bell, T. Boschert, K. Hobson, B. Kearney
AMSTA-TAR	B. Dwornick
BASF	<b>G. Greene</b>
ExxonMobil	R. Banas, P. Kanga
G. M.	K. Zreik, C. O'Brien
Intertek	<b>D. Smith</b> , A. Trader
Lubrizol	L. Hamilton, J. Gropp, M. Umerley, W. Venhoff, B. Bubonic, C. Prengaman
Meritor	<b>B. McGlone</b>
SwRI	<b>B. Koehler</b>
TMC	<b>S. Parke</b>
Volvo	<b>A. Athey</b> (Called In)

### Sign-in and review of membership

Attendance was taken and voting membership reviewed. Sam Higuchi from Afton has changed job responsibilities – Thomas Gottwald will become voting member for Afton. The L-60-1 Surveillance Panel would like to extend our thanks to Sam Higuchi for his contributions to this panel and wish him success in his future endeavors. Also Galan Greene from BASF Corp requested to become a voting member.

**Motioned** by Dale Smith (Intertek) and **Seconded** by Brain Koehler (SwRI) to except these voting membership changes. **Passed 7-0-0** (voting count will increase by two for the remainder of this meeting)

The sign-in sheets, identifying attendance and voting membership, are included; see attachment.

### Review of Agenda

The Agenda was reviewed and is included; see attachment

### Approval of meeting minutes

August 8; 2012, Surveillance Panel Meeting

**Motioned** by Thomas Gottwald (Afton) and **Seconded** by Brain Koehler (SwRI) to except the minutes.

**Passed 9-0-0**

### New Alternator Review

Discussion and Review of alternator pulley information –

**Scott Park.** – All labs have supplied information for what the Labs are currently using. All labs have different ratios on the pulleys – only one Lab has 1:1 ratio **See Attachment.**

**Brian Koehler**– the intent was to avoid huge differences, hindsight is that we shouldn't have 1:1 ratio without any limits. A range of ratio would be a good idea.

**Scott** – changing the ratio will affect the load across the gears – everyone should be aware of that. This could potentially impact test results.

**Angela Trader**– some additional testing was completed to look at the effect of ratio spread. Data was presented. **See Attachment**

**Brian Koehler** – different speeds of the alternator will create possible differences in load due to electrical efficiencies differences in the device, (there is a load speed curve).

**Scott Park** – we somewhat have a torque meter already – non-calibrated (alternator) - so this would be one potentially cheaper option to tighten this. Do we see lab to lab difference? Yes we do. All labs do already run to 128 Watts per procedure.

**Brian Koehler** – If you run SwRI stand with no heating element but controlling speed and watts, eventually stabilize at about 148 F. (Just 1 test stand)

**Scott** – He doesn't think the load doesn't matter. Some of the heat in the stand comes from the gear mesh friction.

**Angela Trader** – Four alternators were checked with torque at 3 different speeds, (.8,1,1.2 ratios equivalent) and torques spread from 1.8 to 1.5 lb-ft. Similar spread to what was seen when alternators were approved. Altering load (watts) appears to cause linear change in torque.

**Dale Smith** – Thinks this is a pretty low variation in effect of torque. Speed doesn't seem to affect load that much – within the bounce of everything else.

**Motioned** by Brian Koehler (SwRI) and **Seconded** by Dale Smith (Intertek); to except **pulleys ratio range of 0.8 to 1.2:1 ratio (1 +/- 0.2: 1 Ratio)**

#### Discussion of the motion:

**Brian Koehler** – we've been successfully referencing stands for years with the old and new shiv on the alternators,

**Larry Hamilton** – discussion on ratios/speeds trying to nail down the nomenclature; – Attempting to focus the group – does ½ lb-ft of load effect the results – we don't have the data at this point to know that, but need to decide if we want to tighten up the ratio.

**Scott Parke** – even at 1:1 you have variation of load, and if that is ok, then the ratio spread would seem ok with him.

Vote was call:

Y – 7 (Bruce, Dale, Scott, Brian, Galen, Allison, Rob)

N – 1 (Larry)

A – 1 (Thomas)

**Motion Passes 7-1-1**

## New Business

Dale – would like to entertain the motion to remove sole source calibration requirement for the venture flow meter – to allow any appropriately accredited laboratory to calibrate device. They are currently waiting on 8 weeks for their flow meter to come back from the one specified lab. 6.1.9

Angela – other labs have not been identified yet, but she is not a fan of this lab and their customer service.

Dale – this is the only equipment in the L-Tests that is specified as a sole source calibration location.

Larry – is in favor of keep it tight and all Labs using the same calibration service; if not this one a better one.

**Motioned** by Dale Smith (Intertek) and **Seconded** by Brain Koehler (SwRI) that **the flow meter be sent out to any qualified 17025 laboratory on an annual basis.**

### Discussion:

Brian - if we can put limits to the calibration guidelines in writing (temperature, range of flow, etc...) to ensure calibration remains consistent.

Scott – would we be ok with delaying vote to come up with specific wording to allow us to vote on specifics?

Jerry – discussion over what 17025 calibration actually means.

Jerry – supportive of Brian's conditional support for the strengthened language.

Jerry, Dale & Brian – would like to table the motion to clarify wording and intent and then continue discussion at the next meeting in February 2013.

Dale and Brian withdrew **Motion and Second.**

## Adjournment

**Motioned** by Thomas Gottwald (Afton) and **Seconded** by Scott Parke (TMC); to adjourn meeting.

**Motion Passed 9-0-0**

Respectfully Submitted;



Larry Hamilton

L-60-1 Surveillance Panel Chairman

# L-60-1 Surveillance Panel

November 7, 2012

Automation Alley; Troy, MI

## Agenda

- I. Call to Order
- II. Membership and agenda review
- III. Approval of the August 2012 SP meeting minutes.
- IV. **New Alternator review**; each lab was asked to supply alternator belt drive system ratio measurements to decide on what tolerance to place into the standard.
- V. **New Business**
- VI. **Adjournment**

**\*For those not traveling, the call in number will be 216-706-7052; Code 324160**

ASTM L-60-1 Surveillance Panel Membership/Mailing List

Meeting Date: November 7, 2012

Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
CALLERD IN	Athey, Allison	Non-voting	Volvo Group Trucks Technology 13302 Pennsylvania Avenue Hagerstown, Maryland 21740	Phone: 301-573-5684 Fax: E-Mail: allison.athey@volvo.com
ACB	Banas, Rob	<del>Non-voting</del> VOTING	ExxonMobil Fuels Lubricants & Specialties 114 Arcadia Park Drive Canton, GA 30114	Phone: 678-493-3930 Fax: E-Mail: rob.banas@exxonmobil.com
DEB	Bell, Don	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 804-788-6332 Fax: 804-788-6342 E-Mail: Don.Bell@aftonchemical.com
TC	Boschert, Tom	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 804-788-5202 Fax: 804-788-6342 E-Mail: Tom.Boschert@aftonchemical.com
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	Clark, Jeff	Non-voting	ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, Pennsylvania 15206	Phone: 412-365-1032 Fax: 412-365-1047 E-Mail: jmf@astmtmc.cmu.edu
	Comfort, Allen	Non-voting	AMSTA-TR-D/210 (Allen Comfort) U S Army Tank, Automotive, and Armament Command Warren, Michigan 48397-5000	Phone: 586-574-4225 Fax: 586-574-4244 E-Mail: comforta@cc.tacom.army.mil
GRD	Dharte, John	Non-voting	American Axle 1 Dauch Dr Detroit, MI 48212	Phone: 313 758-4687 Fax: E-Mail: DharteJ@aam.com
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\* Initial to indicate attendance at subject meeting

ASTM L-60-1 Surveillance Panel Membership/Mailing List


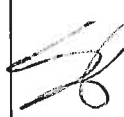



Meeting Date: November 7, 2012

Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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PK	Kanga, Percy R.	Non-Voting	Commercial Vehicle, Marine & Gas Engine Lubricants ExxonMobil Research & Engineering 600 Billingsport Road Paulsboro, NJ. 08066	Phone: 856-224-2094 Fax: 856-224-3613 E-Mail: percy.r.kanga@exxonmobil.com
WAK	Kearney, Bill	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 248-350-0640 Fax: E-Mail: bill.kearney@aftonchemical.com
BK	Koehler, Brian	Voting	Southwest Research Institute Bldg.209 San Antonio, TX 78238-5166	6220 Culebra Road Phone: (210) 522-3588 Fax: (210) 684-7523 E-Mail: bkoehler@swri.org
	Marougy, Thelma	Non-voting	Eaton Corporation 26201 Northwestern Highway Southfield, Michigan 48037	Phone: 248-354-6985 Fax: 248-354-2739 E-Mail: thelmaemarougy@eaton.com

\* Initial to indicate attendance at subject meeting

ASTM L-60-1 Surveillance Panel Membership/Mailing List

Meeting Date: November 7, 2012

Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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	Smith, Dale	Voting	Intertek Automotive Research 5454 Bandera Rd San Antonio TX 78238	Phone: 412-855-6854 Fax: E-Mail: Dale.Smith@intertek.com
	Sullivan, Bill	Non-voting	WTSullivan, Inc. 5 Scheiber Drive Brick, New Jersey 08723	Phone: 908-930-3512 Fax: 267-220-7750 E-Mail: wtsullivan@comcast.net
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\* Initial to indicate attendance at subject meeting



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Meeting Date: November 7, 2012

Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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	Villahermosa, Luis	Non-voting	AMSTA-TR-D/210 (Luis Villahermosa) U S Army Tank, Automotive, and Armament Command Warren, Michigan 48397-5000	Phone: 586-574-4207 Fax: 586-574-4123 E-Mail: villahel@cc.tacom.army.mil
	Zakarian, Jack	Non-voting	Chevron Products Company 100 Chevron Way Richmond, California 94802-0627	Phone: 510-242-3595 Fax: 510-242-3758 E-Mail: jaza@chevron.com
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BB	BRAD BUBONIC	non voting	LUBRICOL	Phone: 440 347-5325 Fax: E-Mail: BRAD.BUBONIC@LUBRICOL.COM
CP	CHARLES Prengaman	non voting	LUBRIZOL	Phone: 440-347-4225 Fax: E-Mail:
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				Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:

\* Initial to indicate attendance at subject meeting



ASTM L-60-1 Surveillance Panel Membership/Mailing List

Meeting Date: ~~August 8, 2012~~  
11-30-2012

Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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	Banas, Rob	<del>Non-voting</del> VOTING	ExxonMobil Fuels Lubricants & Specialties 114 Arcadia Park Drive Canton, GA 30114	Phone: 678-493-3930 Fax: E-Mail: rob.banas@exxonmobil.com
	Bell, Don	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 804-788-6332 Fax: 804-788-6342 E-Mail: Don.Bell@aftonchemical.com
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Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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X	Hamilton, Larry	Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-2326 Fax: 440-347-2878 E-Mail: larry.hamilton@lubrizol.com
	Hobson, Kevin	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 804-788-5375 Fax: 804-788-6358 E-Mail: kevin.hobson@aftonchemical.com
	Huron, John	Non-voting	Chevron Oronite 4502 Centerview Drive, Suite 210 San Antonio, Texas 78228	Phone: 210-731-5609 Fax: 210-731-5699 E-Mail: HURO@ChevronTexaco.com
	Kanga, Percy R.	Non-Voting	Commercial Vehicle, Marine & Gas Engine Lubricants ExxonMobil Research & Engineering 600 Billingsport Road Paulsboro, NJ. 08066	Phone: 856-224-2094 Fax: 856-224-3613 E-Mail: percy.r.kanga@exxonmobil.com
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X	Koehler, Brian	Voting	Southwest Research Institute Bldg.209 San Antonio, TX 78238-5166	6220 Culebra Road Phone: (210) 522-3588 Fax: (210) 684-7523 E-Mail: bkoehler@swri.org
	Marougy, Thelma	Non-voting	Eaton Corporation 26201 Northwestern Highway Southfield, Michigan 48037	Phone: 248-354-6985 Fax: 248-354-2739 E-Mail: thelmaemarougy@eaton.com
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Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
	Muransky, Troy	Non-voting	Meritor 2135 West Maple Troy, Michigan 48084	Phone: 248-435-1407 Fax: E-Mail: troy.muransky@meritor.com
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Y	Parke, Scott	Voting	ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, Pennsylvania 15206	Phone: 412-365-1030 Fax: 412-365-1047 E-Mail: fmf@astmtmc.cmu.edu
	Prengman, Chris	Non-voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-4225 Fax: 440-347-2878 E-Mail: larry.hamilton@lubrizol.com
	Recinos, Will	Non-voting	Afton Chemical Corporation 500 Spring Street Richmond, Virginia 23219	Phone: 804-788-5323 Fax: E-Mail: william.recinos@aftonchemical.com
	Shah, Rajesh	Non-voting	Koehler Instrument Company 1595 Sycamore Avenue Bohemia, New York 11716	Phone: 516-589-3800 Fax: 516-589-3815 E-Mail:
Y	Smith, Dale	Voting	Intertek Automotive Research 5454 Bandera Rd San Antonio TX 78238	Phone: 412-855-6854 Fax: E-Mail: Dale.Smith@intertek.com
	Sullivan, Bill	Non-voting	WTSullivan, Inc. 5 Scheiber Drive Brick, New Jersey 08723	Phone: 908-930-3512 Fax: 267-220-7750 E-Mail: wtsullivan@comcast.net
	Thorpe, Ryan	Non-voting	Southwest Research Institute Bldg.209 San Antonio, TX 78238-5166	6220 Culebra Road Phone: (210) 522-6404 Fax: (210) 684-7523 E-Mail: ryan.thorpe@swri.org
Y	Trader, Angela	Non-voting	Intertek Automotive Research 5454 Bandera Rd San Antonio TX 78238	Phone: 210-706-1533 Fax: E-Mail: angela.trader@intertek.com

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Present / Initial	Name	Voting Status	Company Name & Address	Phone & Fax & E-Mail
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	Ved. shintan	Non-voting	Ford- Trans & Driveline Lubrication 35500 Plymouth Rd. Livonia, MI 48150	Phone: 313-805-9695 Fax: 267-220-7750 E-Mail: cved@ford.com
	Venhoff, Wes	Non-voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-4879 Fax: 440-347-2878 E-Mail: wes.venhoff@lubrizol.com
	Villahermosa, Luis	Non-voting	AMSTA-TR-D/210 (Luis Villahermosa) U S Army Tank, Automotive, and Armament Command Warren, Michigan 48397-5000	Phone: 586-574-4207 Fax: 586-574-4123 E-Mail: villahel@cc.tacom.army.mil
	Zakarian, Jack	Non-voting	Chevron Products Company 100 Chevron Way Richmond, California 94802-0627	Phone: 510-242-3595 Fax: 510-242-3758 E-Mail: jaza@chevron.com
	Zreik, Khaled	Non-voting	General Motors	Phone: 248-977-9214 Fax: E-Mail: khaled.zreik@gm.com
Y	PAT ADAMS		AFTON	Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:
				Phone: Fax: E-Mail:

\* Initial to indicate attendance at subject meeting

	Pulley/Belt System Diameter		Ratio (drive:alt)
	Drive pulley	Alternator pulley	
Afton			
Afton alternate			1.11:1
Afton alternate			1.17:1
			1.20:1
Intertek	2.4810 in (stamped)	2.347	1.06:1
Intertek alternate	2.7295 in (machined – no longer in use)		1.16:1
Lubrizol	2.416	2.417	1:1
Lubrizol alternate			
Southwest 15A	2.420	2.755	0.88:1
Southwest alternate 12B	2.410	2.762	0.87:1

**Intertek**

# Remy 91751 Alternator Study



# Questions to Ponder

- How equal are the “batch” alternators?
- How much does alternator speed affect alternator torque?
- How does altering load affect the alternator torque?
- How would altering load affect L60-1 test results?

**Intertek**

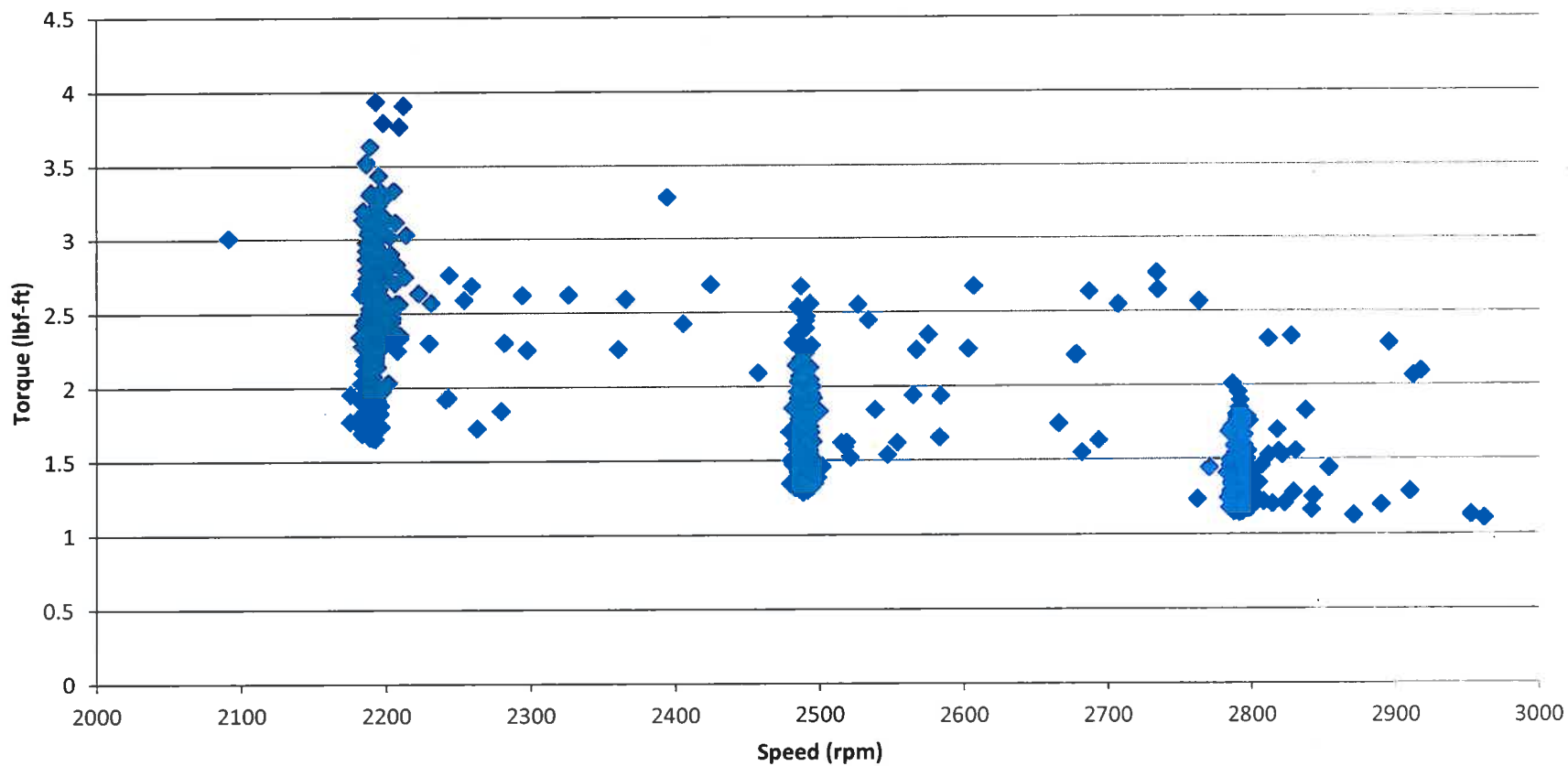
# Alternator Test Stand





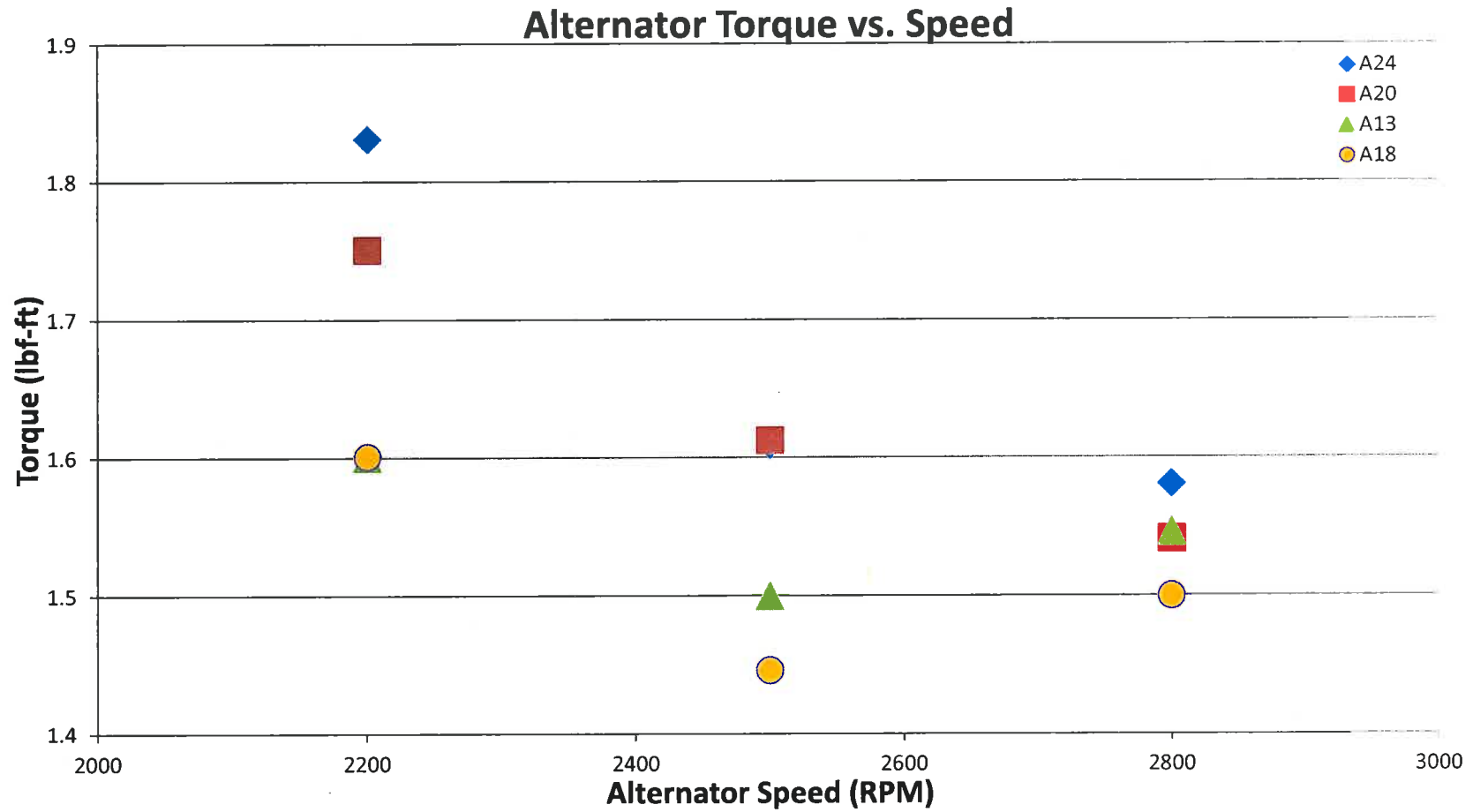
# Initial Testing: Replacement Option

Alternator Torque



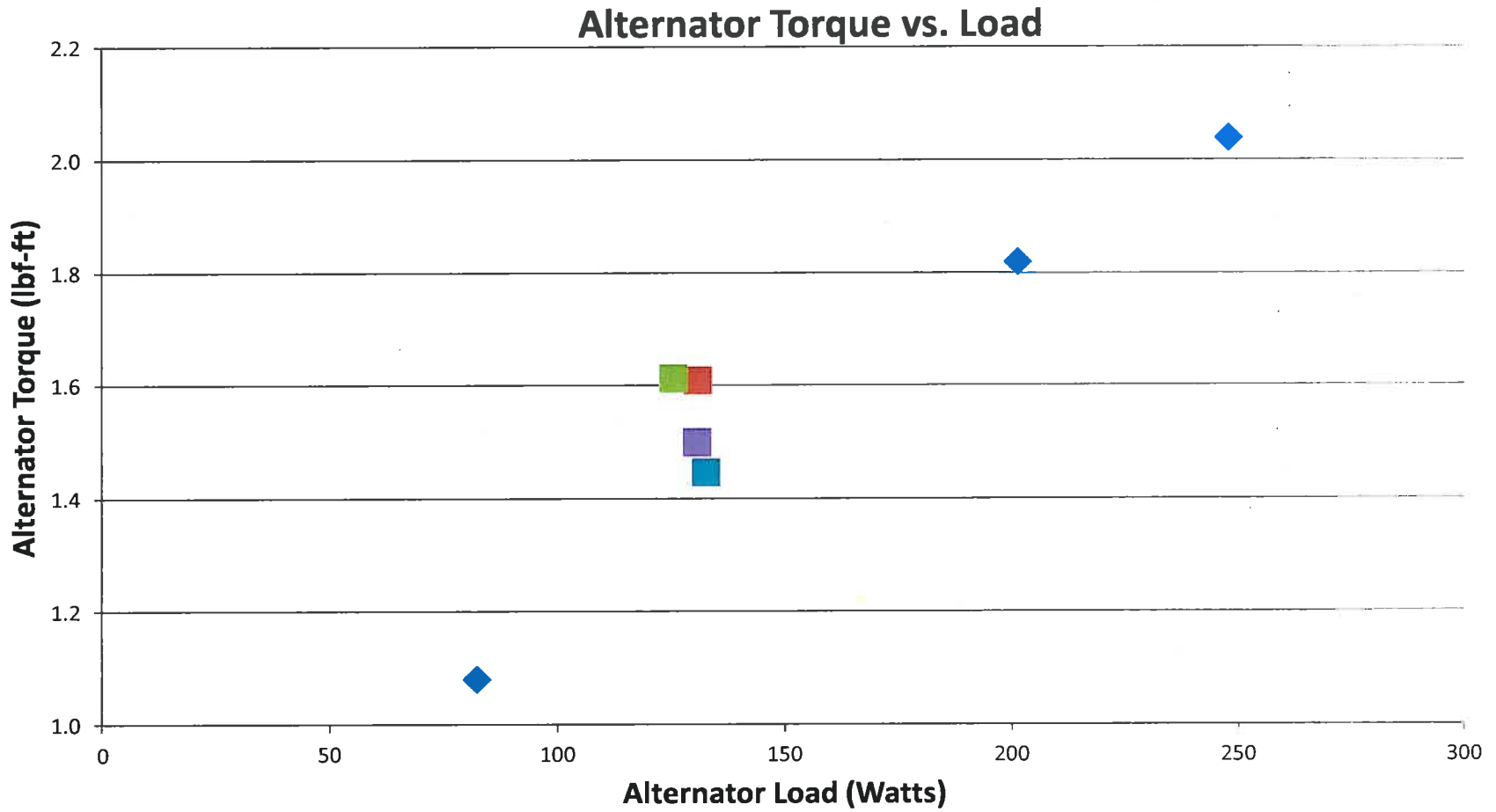


# Alternator Comparison





# Alternator Load Test



# What We Learned

- Batch alternators tested have very similar performance and efficiency.
- Alternator speed +/- 300 RPM from 1:1 ratio does not significantly effect torque.
- Torque increases in a fairly linear manner with increased alternator load.
- How this affects L60-1 test results is yet to be determined.