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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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January 15th, 2005

Reply to:

Donald T. Bartlett
The Lubrizol Corporation
29400 Lakeland Blvd.
Wickliffe, OH 44092
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ASTM D02.B0.03 L-37 Surveillance Panel
Members and Guests:

Attached for your review and comment are the unconfirmed minutes of the November 3rd, 2004 L-37 Surveillance Panel Meeting at the PRI Headquarters in Warrendale, PA. Please direct any corrections or comments to my attention.

Sincerely,

Donald T. Bartlett, Chairman
L-37 Surveillance Panel
Attachments

Report of Meeting
L-37 Surveillance Panel
PRI Headquarters, Apollo Room, Warrendale, Pa.
November 3rd, 2004

Sign-in/Review of Membership: The meeting was called to order at 08:14. The sign-in sheet is included as Attachment 1. There were no membership changes to report, see Attachment 2.

Meeting Agenda: The meeting agenda was reviewed and is included as Attachment 3.

Approval of Minutes:

Mr. Koglin motioned, second by Mr. Koehler: That we accept the minutes from the August 24 & 25th Surveillance Panel and the September 21st and October 5th, 2004 Teleconference panel meetings as written with no corrections. The motion was approved unanimously.

Action Items assigned from this meeting:

- TMC is to confirm if the fluids from the recent 5-drum oil purchase (LT1 and LT2) came from the same large container.

Motions approved from the November 3rd, 2004 Meeting:

Motion #1 ⇒ Mr. Koglin motioned, Second ⇒ Mr. Koehler: That we accept the minutes from the August 24 & 25th Surveillance Panel and the September 21st and October 5th, 2004 Teleconference panel meetings as written with no corrections.

Motion #2 ⇒ Mr. Koehler motioned, Second ⇒ Mr. Koglin: Modify the print to eliminate the 5 inch dimension (for rear nozzles and specifically specify a $3 \pm \frac{1}{2}$ inch and $2 \pm \frac{1}{2}$ inch dimensions for rear nozzles, left and right respectively.

Motion #3 ⇒ Mr. Koehler motioned, Second ⇒ Mr. Koglin: Accept the Task Force recommendation to revise the drive shaft and axle shaft specifications for Test Method D6121 (changes are to sections 6.2.7 and 6.2.8, see summary detail section of minutes).

Summary of Meeting Discussion, Actions, Proposals and Motions:

Proposed Changes for Information Letter 04-3:

D6121, Axle Cooling System, Figure A5.1:

The Chairman explained that an oversight was made on one dimension of the mechanical drawings detailing the L-37 cooling system (figure A5.1) (Approved in Information letter 04-1). The dimension involved the linear distance of the rear cooling nozzles to the centerline of the pinion.

Motion (Motion \Rightarrow Brian Koehler, Second \Rightarrow Cory Koglin) Modify the print to eliminate the 5 inch dimension (for rear nozzles and specifically specify a the $3 \pm \frac{1}{2}$ inch and $2 \pm \frac{1}{2}$ inch dimensions for rear nozzles, left and right respectively. The motion passed unanimously with 6 votes in favor. See Attachment 4.

D6121, Driveshaft Specifications, Sections 6.2.7 and 6.2.8:

A Task Force recommendation was made to standardize the Drive shaft and Axle shaft Specifications to be more consistent across the L-37 and L-42/L42-1 tests.

- **Section 6.2.7, Dynamometer Connecting Shafts** - Fabricate shafts connecting the dynamometer to the axle shafts. Shafts shall be strong enough to handle the torques encountered and shall be dynamically (spin) balanced.
- **Section 6.2.8, Drive Shaft and Universal Joints** - Fabricate a shaft with universal joints connecting the manual transmission and the test axle. The shaft shall have a 4 ± 0.2 -inch outside diameter with a 0.095 ± 0.005 -inch wall thickness. Shaft and universal joints should be strong enough to handle the torques encountered and shall be dynamically (spin) balanced.

Motion (Motion \Rightarrow Brian Koehler, Second \Rightarrow Cory Koglin) Accept the Task Force recommendation to revise the drive shaft and axle shaft specifications for Test Method D6121. The motion passed unanimously, 6 in favor.

Note: All changes are effective with the next reference on or after November 15th, 2004.

Update on 2004 Non-Lubrited Gear Batch V1L351/P4T771.

Twenty-Five tests of a 44-test matrix have been completed to date. The data is available on the TMC website. Chairman Bartlett reported that all labs are actively involved in matrix testing; 1 lab has completed their commitment on their 11-test matrix. Two labs reported they should complete their matrix commitments in early/mid November. A fourth lab reports that they should complete their matrix commitment by the end of November.

Status of TMC 151 Re-blend

Mr. Lind reported that the supplier has indicated that the base oil for TMC 151 cannot be replaced for the re-blend. Preliminary L-60-1 data with the same package in another base stock indicates that Sludge and ACV is acceptable, but there were larger differences on Pentane & Toluene insolubles.

LT1-1 (TMC 152) and LT2-1 (TMC 153)

Chairman Bartlett reviewed an open action item from the last meeting. TMC was to obtain 5 X 55 drums of each commercial oil and ask the suppliers to indicate whether the supplier could verify whether the material was from the same batch lot as originally supplied.

Mr. Lind indicated that the TMC has acquired both oils and are waiting for suppliers to provide the requested data. The TMC has analyzed (withdrawn samples from top, middle, and bottom of each drum) and determined that the analysis meets the TMC quality check process for being the same fluid.

One supplier has supplied the requested information and one has not. Both have communicated that the base oil was the same as the original purchase but couldn't verify/provide any additional details. Theoretically, the properties are supposed to be the same. It was determined that the original batch purchase and the later batch purchase would/should not be mixed. The recent purchased fluids will be identified as TMC 152-1 and 153-1.

Mr. Koehler felt that it would be more desirable to have the oils (5 drums) mixed together. The TMC said that they do not blend the gear oils together because it is too viscous (pump cavitation).

Action Item: TMC is to confirm if the fluids from the recent 5-drum oil purchase came from the same large container. Juan mentioned that it is very possible that the label on the drums would indicate whether the fluids came from the same batch/lot. The action item and final decision will be addressed at the February panel meeting.

Being no further business to conduct, Mr. Whitton motioned/Dale Smith seconded that the meeting be adjourned and it was at 8:45 a.m.

Respectfully submitted,

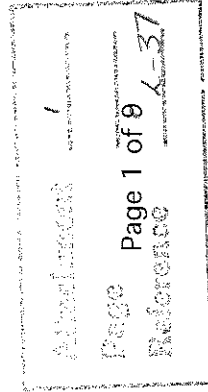


Donald T. Bartlett
L-37 Surveillance Panel Chairman

ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004



Initials*	Name	Voting Status	Company Name & Address	Phone/Email Info
	Akuczewich, Ed	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-2415 Fax: 440-347-9011 E-Mail: esak@lubrizol.com
<i>DTB</i>	Bartlett, Don	Voting/Chair	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-2388 Fax: 440-347-2878 E-Mail: dtb@lubrizol.com
	Boschert, Tom	Non Voting	Afton Chemical 2000 Town Center, Suite Southfield, MI 48075	Phone: 248-350-0640 ext. 228 Fax: 248-350-0025 E-Mail: Tom_boschert@aftonchemical.com
	Bryson, Tom	Voting	Mack Trucks 13302 Pennsylvania Avenue Hagerstown, Maryland 21740	Phone: 301-790-6744 Fax: 301-790-5605 E-Mail: thomas.bryson@volvo.com
<i>JAB</i>	Buitrago, Juan	Voting	Chevron Oronite Company 100 Chevron Way Richmond, California 94802	Phone: 510-242-1161 Fax: 510-242-3392 E-Mail: jabu@chevrontexaco.com



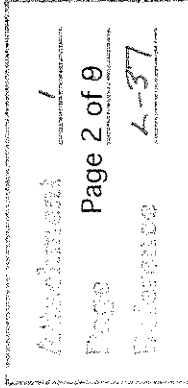
* Initial to indicate attendance at subject meeting

ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004




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	Chambers, Harold	Non-voting	Visteon Corporation 17000 Rotunda Drive, Cube C290 81 Dearborn, MI 48120	Phone: 313-755-4246 Fax: E-Mail: hchamber@visteon.com
	De La Fuente, Hector	Non Voting	Southwest Research Institute PO Drawer 28510 San Antonio, Texas 78228-0510	Phone: 586-522-5996 Fax: 210-684-7523 E-Mail: hdelafuente@swri.edu
	Dharte, John	Voting	American Axle & Manufacturing 2965 Technology Drive Rochester Hills, MI 48309-3589 78228-0510	Phone: 248-299-6478 Fax: 248-293-6945 E-Mail: Dhartej@aam.com
	Farber, Frank	Non 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
	Fett, Greg	Non Voting	Dana Corporation P.O. Box 955 Toledo, Ohio 43697	Phone: 419-887- Fax: 419-887-5962 E-Mail: greg.fett@dana.com

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ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004

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	Gropp, Jerry	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-1223 Fax: 440-347-1555 E-Mail: jlg@lubrizol.com
	Huron, John	Non Voting	Chevron Oronite Company LLC Suite 210 San Antonio, Texas 78228-1374	Phone: 210-731-5609 Fax: 210 731 5699 E-Mail: HURO@chevrontexaco.com
	Koehler, Brian	Voting	Southwest Research Institute PO Drawer 28510 San Antonio, Texas 78228-0510	Phone: 210-522-3588 Fax: 210-684-7523 E-Mail: bkoehler@swri.edu
	Koglin, Cory	Voting	Afton Chemical 500 Spring Street Richmond, VA 23218	Phone: 804-788-5305 Fax: 804-788-6358 E-Mail: Cory_Koglin@aftonchemical.com

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ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004

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	Kozlowski, Ralph	Non Voting	PARC Technical Services, Inc. 100 William Pitt Way Pittsburg, PA 15238	Phone: 412-826-5044 Fax: 412-826-5443 E-Mail:
	Layton, Kevin	Non Voting	Afton Chemical 500 Spring Street Richmond, VA 23218	Phone: 804-788-5363 Fax: 804-788-6358 E-Mail: Kevin_Layton@aftonchemical.com
<i>DML</i>	Lind, Don	Voting	ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, Pennsylvania 15206	Phone: 412-365-1034 Fax: 412-365-1047 E-Mail: dml@astmtmc.cmu.edu
	Linden, Jim	Voting	GM Research & Development 30500 Mound Rd. MC 480-106-160 Warren, MI 48090	Phone: 586-986-1888 Fax: 586-986-2094 E-Mail: James.L.Linden@GM.com
	Purnell, Keith	Non Voting	Performance Review Institute 161 Thornhill Rd. Warrendale, Pa. 15086-7527	Phone: 724-772-1616 ext 8182 Fax: 724-772-1699 E-Mail: kpurnell@sae.org

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Attachment <u>1</u>
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ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004

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	Marougy, Thelma	Voting	Eaton Corporation 26201 Northwestern Highway Southfield, MI 48034	Phone: 248-226-6985 Fax: 248-226-2739 E-Mail: thelmaemarougy@eaton.com
	McGloone, Bruce	Voting	Meritor Automotive 2135 West Maple Troy, Michigan 48084	Phone: 248-435-9929 Fax: 248-435-1411 E-Mail: Bruce.McGloone@ArvinMeritor.com
	Miller, Kenny	Non Voting	Dana Corporation 1293 Glenway Drive Statesville, NC 28677	Phone: 704-878- Fax: 704-878-5735 E-Mail: Kenny.miller@dana.com
	Okamuro, Ken	Voting	Dana Corporation 1293 Glenway Drive Statesville, NC 28677	Phone: 704-878-5642 Fax: 704-878-5735 E-Mail: Ken.Okamuro@dana.com

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Initials*	Name	Voting Status	Company Name & Address	Phone/Email Info
	Radonich, Peter	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-2184 Fax: 440-347-9011 E-Mail: pdr@lubrizol.com
	Sanchez, Art	Non Voting	Southwest Research Institute PO Drawer 28510 San Antonio, Texas 78228-0510	Phone: 210-522-3445 Fax: 210-680-1777 E-Mail: asanchez@swri.edu
CSC	Schenkenbeger, Chris	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-2927 Fax: 440-347-2878 E-Mail: csc@lubrizol.com
ASD	Smith, Dale	Voting	PARC Technical Services, Inc. 100 William Pitt Way Pittsburgh, PA 15238	Phone: 412-826-5051 Fax: 412-826-5443 E-Mail: dsmith@parctech.com
	Sopko, Harry	Non Voting	PARC Technical Services, Inc. 100 William Pitt Way Pittsburgh, PA 15238	Phone: 412-826-5165 Fax: 412-826-5443 E-Mail: hsopko@parctech.com

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Attachment 1
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ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004

Initials*	Name	Voting Status	Company Name & Address	Phone/Email Info
<i>WMS</i>	Sullivan, Bill	Voting	ExxonMobil Chemical Company P. O. Box 3140 Edison, New Jersey 08818	Phone: 732-321-3354 Fax: 732-321-6064 E-Mail: william.t.sullivan@exxonmobil.com
	Tschirhart, Garland	Non Voting	Southwest Research Institute PO Drawer 28510 San Antonio, Texas 78228-0510	Phone: 210-522-3445 Fax: 210-680-1777 E-Mail: gtschirhart@swri.edu
	Vermilya, Denise	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-347-4681 Fax: 440-347- E-Mail: drc@lubrizol.com
	Vettel, Paula	Voting	D. A. Stuart Company 4580 Weaver Parkway Warrenville, Illinois 60555	Phone: 630-393-8859 Fax: 630-393-8577 E-Mail: pvettel@dastuart.net
<i>CW</i>	Whitton, Claire	Non Voting	Afton Chemical PO Box 2158, 500 Spring St. Richmond, VA 23218	Phone: 804-788-5052 Fax: 804-788-6243 E-Mail: Claire_Whitton@afonchemical.com

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ASTM L-37 Surveillance Panel Membership/Mailing List

Meeting Date: November 3, 2004

Initials*	Name	Voting Status	Company Name & Address	Phone/Email Info
	Yanchar, Paul	Non Voting	The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, Ohio 44092	Phone: 440-3474468 Fax: 440-347-9011 E-Mail: pjy@lubrizol.com
	Zakarian, Jack	Non Voting	Chevron Products 100 Chevron Way Richmond, CA 94802	Phone: 510-242-3595 Fax: 510-242-3758 E-Mail: jaza@chevron.com
	Zreik, Khaled A.	Voting	AMSTA-TR-D/210 Tank Automotive & Armament 6501 East 11 Mile road Warren, MI 48397-5000	Phone: 586-574-4227 Fax: 586-574-4244 E-Mail: Zreikk@tacom.army.mil
DR B	Bell, Don	Non voting	Afton Chemical 500 Springs Street Richmond, VA 23219	Phone: 804 788 6332 Fax: 804 788 6243 E-Mail: Don.Bell@aftonchemical.com
				Phone: Fax: E-Mail:

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Reference L-37

L-37 Surveillance Panel Voting Members

Donald Bartlett	The Lubrizol Corporation (Chairman)
Tom Bryson	Volvo Powertrain Corporation
Juan Buitrago	Chevron Oronite Company
John Dharte	American Axle & Manufacturing
Brian Koehler	Southwest Research Institute
Cory Koglin	Afton Chemical Company
Don Lind	ASTM Test Monitoring Center
Jim Linden	GMR Research and Development
Thelma Marougy	Eaton Corporation
Bruce McGlone	ArvinMeritor Materials Engineering
Ken Okamuro	Dana Corporation
Dale Smith	PARC Technical Services
William Sullivan	ExxonMobil Chemical Company
Paula Vettel	D.A. Stuart Company
Khaled A. Zreik	AMSTA-TR-D/210 US Army Tacom-Tardec

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**L-37 Surveillance Panel
PRI/ Headquarters, Apollo Room - Warrendale, PA
November 3rd, 2004**

AGENDA

Call to Order/ Membership & Agenda Review

Approval of Minutes:

- **August 24th & 25th, 2004 SP Meeting**
- **September 21st, 2004 SP Teleconference Call/Meeting**
- **October 5th, 2004 SP Teleconference Call/Meeting**

One Proposed Change to Information Letter 04-1

2004 Non-Lubrited Hardware Matrix Status

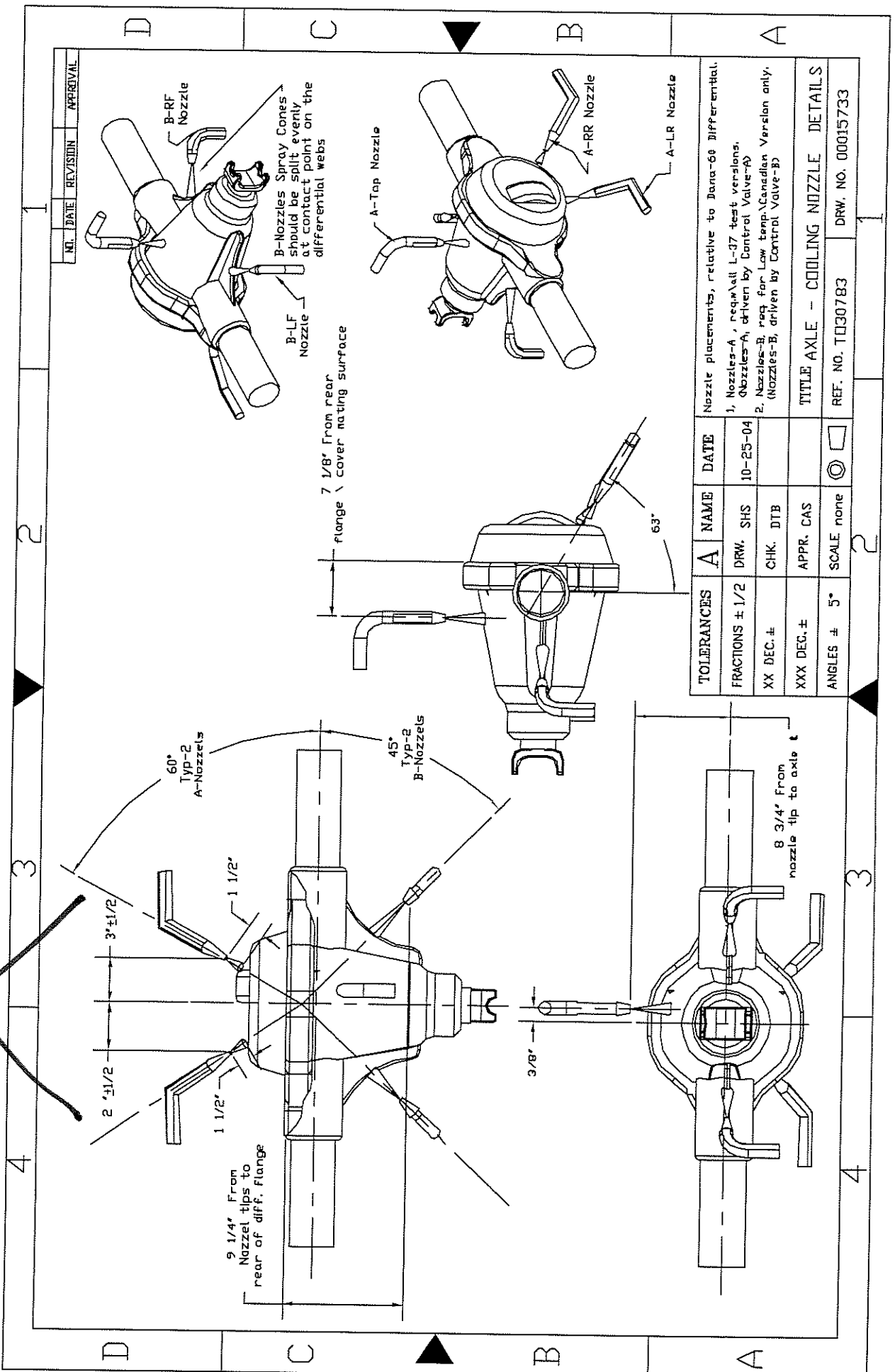
TMC Update:

- **Status of TMC 151 Re-blend**
- **LT1-1 (TMC 152) and LT2-1 (TMC 153) fluid differences (original shipment vs. additional purchase)**

Adjournment

Attachment	<u>3</u>
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Attachment 4
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NO.	DATE	REVISION	APPROVAL

TOLERANCES	A	NAME	DATE
FRACTIONS ± 1/2	DRW.	SHS	10-25-04
XX DEC. ±	CHK.	DTB	
XXX DEC. ±	APPR.	CAS	
ANGLES ± 5°	SCALE	none	

Nozzle placements, relative to Dana-60 Differential.

- Nozzles-A, req'd all L-37 test versions.
- Nozzles-B, req'd for Low temp. Canadian Version only. (Nozzles-B, driven by Control Valve-B)

TITLE AXLE - COOLING NOZZLE DETAILS
 REF. NO. 1030783
 DRW. NO. 00015733