

**Test Method D5704  
(L-60-1)**

**Version** L601 VERSION 20000126  
**Conducted For**  
 TSTSPON1  
 TSTSPON2

LABVALID	<b>V = Valid</b>
	<b>I = Invalid</b>
	<b>N = Results Cannot be Interpreted. (Refer To Comment Section)</b>

Test Number			
<b>Test Stand:</b> STAND	<b>Stand Run Number:</b> RSTRUN STRUN		
<b>Date Completed:</b> RDTCOMP DTCOMP	<b>End Of Test Time:</b> REOTIME EOTIME		
<b>Oil Code<sup>A</sup>:</b> CMIR	OILCODE		
<b>Formulation/Stand Code:</b>		FORM	
<b>Alternate Codes:</b>	ALTCODE1	ALTCODE2	ALTCODE3

<p><b>In my opinion this test</b> OPVALID <b>been conducted in a valid manner in accordance with Test Method D5704 and the appropriate amendments through the Information Letter System. The remarks included in this report describe anomalies associated with this test.</b></p>
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<sup>A</sup> CMIR or Non-Reference Oil Code

**Submitted By:**

SUBLAB  
 \_\_\_\_\_  
**Testing Laboratory**

SUBSIGIM  
 \_\_\_\_\_  
**Signature**

SUBNAME  
 \_\_\_\_\_  
**Typed Name**

SUBTITLE  
 \_\_\_\_\_  
**Title**

SUBSECT  
 \_\_\_\_\_  
**Section**

**Test Method D5704  
(L-60-1)  
Form 1**

**Reference Test Result Summary Sheet**

<b>Lab</b>	<b>Stand</b>		<b>Stand Run</b>
LAB	STAND		RSTRUN
<b>Start Date</b>	<b>Date Completed</b>	<b>End Of Test Time</b>	<b>Test Length</b>
RDTSTRT	RDTCOMP	REOTIME	RTESTLEN
<b>CMIR</b>	<b>TMC Oil Code</b>	<b>Viscosity Grade</b>	<b>Gear Batch</b>
CMIR	IND	RSAEVISC	RGEARBAT
<b>Laboratory Oil Code</b>		RLABOCOD	
<b>Latest Information Letter Test Was Run Under</b>		RINFOLET	

	<b>Viscosity Increase (%)</b>	<b>Pentane Insolubles (% wt.)</b>	<b>Toluene Insolubles (% wt.)</b>	<b>Average Carbon/Varnish (merits)</b>	<b>Average Sludge (merits)</b>
<b>Original Results</b>	RVISINC	RPEN	RTOL	RVAR	RSLG
<b>Transformed Results</b>	TRVISINC	TRPEN	TRTOL	TRVAR	TRSLG
<b>Correction Factor</b>					
<b>Corrected Transformed Result</b>					
<b>Final Transformed Result</b>	TRVISFNL	TRPENFNL	TRTOLFNL	TRVARFNL	TRSLGFNL
<b>Final Original Unit Result</b>	RVISFNL	RPENFNL	RTOLFNL	RVARFNL	RSLGFNL

Reference Oil Test

**Test Method D5704  
(L-60-1)  
Form 2**

**Non-Reference Test Result Summary Sheet**

<b>Lab</b>	<b>Stand</b>		<b>Stand Run #</b>
LAB	STAND		STRUN
<b>Start Date</b>	<b>Date Completed</b>	<b>End of Test Time</b>	<b>Test Length</b>
DTSTRT	DTCOMP	EOTIME	TESTLEN
<b>Oil Code</b>			
OILCODE			
<b>Viscosity Grade</b>	<b>Gear Batch</b>	<b>Laboratory Oil Code</b>	
SAEVISC	GEARBAT	LABOCODE	
<b>Formulation Stand Code</b>		FORM	
<b>Latest Information Letter Test Was Run Under</b>		INFOLETN	

	<b>Viscosity Increase (%)</b>	<b>Pentane Insolubles (% wt.)</b>	<b>Toluene Insolubles (% wt.)</b>	<b>Average Carbon/Varnish (merits)</b>	<b>Average Sludge (merits)</b>
<b>Original Results</b>	VISINC	PEN	TOL	VAR	SLG
<b>Transformed Results</b>	TVISINC	TPEN	TTOL	TVAR	TSLG
<b>Correction Factor</b>	VISINCCF	PENCF	TOLCF	VARCF	SLGCF
<b>Corrected Transformed Result</b>	VISICCOR	PENCOR	TOLCOR	VARCOR	SLGCOR
<b>Severity Adjustment</b>	VISSA	PENSA	TOLSA	VARSA	SLGSA
<b>Final Transformed Result</b>	TVISFNL	TPENFNL	TTOLFNL	TVARFNL	TSLGFNL
<b>Final Original Unit Result</b>	VISFNL	PENFNL	TOLFNL	VARFNL	SLGFNL

Non-Reference Oil Test

**Test Method D5704  
(L-60-1)  
Form 3**

Operational Summary

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE		

OPERATIONS	TOTAL	AVERAGE	MINIMUM	MAXIMUM
Test Length, h	ESTLEN TESTLEN			
Warm-up Time, min	WUPTIME			
Air Box Temperature, °F		AIRTAVG	AIRTMIN	AIRTMAX
Average Air Flow, mg/min		AAIRFLO		
Oil Temperature, °F		OILTAVG	OILTMIN	OILTMAX
Large Gear Speed, r/min		LGRPMAVG		
Alternator Load, W		LOADAVG		
<b>MEASUREMENTS</b>				
Catalyst Weight Loss, g	CATWTLS			
Catalyst Weight Loss, %	CATWTLSP			
Initial Oil Charge Weight, g	INOILWT			
Final Drain Weight, g	FNOILWT			
Oil Weight Loss, g	OILWTLS			
Oil Weight Loss, %	OILWLPER			
Acid Number (Test Method D 664)	ACIDD664			

<b>TEST TIME, h</b>	<b>VISCOSITY, cSt</b>
<b>0</b>	VNEW
<b>50</b>	V50

**Test Method D5704  
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Form 4**

**Downtime and Comments**

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE		

Number of Downtime Occurrences			DWNOC
Test Hours	Date	Downtime	Reasons
DOWNR0	DDATR001	DTIMR001	DREAR001
DOWNR0	DDATR002	DTIMR002	DREAR002
DOWNR0	DDATR003	DTIMR003	DREAR003
DOWNR0	DDATR004	DTIMR004	DREAR004
DOWNR0	DDATR005	DTIMR005	DREAR005
DOWNR0	DDATR006	DTIMR006	DREAR006
DOWNR0	DDATR007	DTIMR007	DREAR007
DOWNR0	DDATR008	DTIMR008	DREAR008
DOWNR0	DDATR009	DTIMR009	DREAR009
DOWNR0	DDATR010	DTIMR010	DREAR010
DOWNR0	DDATR011	DTIMR011	DREAR011
DOWNR0	DDATR012	DTIMR012	DREAR012
DOWNR0	DDATR013	DTIMR013	DREAR013
DOWNR0	DDATR014	DTIMR014	DREAR014
DOWNR0	DDATR015	DTIMR015	DREAR015
<b>Total Downtime</b>		TOTLDOWM	

Other Comments	
Number of Comment Lines	TOTCOM
OCOMR001	
OCOMR002	
OCOMR003	
OCOMR004	
OCOMR005	
OCOMR006	
OCOMR007	
OCOMR008	
OCOMR009	
OCOMR010	
OCOMR011	
OCOMR012	
OCOMR013	
OCOMR014	
OCOMR015	

**Test Method D5704  
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Form 4A**

**Downtime and Comments**

**Unscheduled Downtime & Maintenance Summary**

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE		

Number of Downtime Occurrences			DWNOCF
Test Hours	Date	Downtime	Reasons
OWNR01	DDATR016	DTIMR016	DREAR016
OWNR01	DDATR017	DTIMR017	DREAR017
OWNR01	DDATR018	DTIMR018	DREAR018
OWNR01	DDATR019	DTIMR019	DREAR019
OWNR02	DDATR020	DTIMR020	DREAR020
OWNR02	DDATR021	DTIMR021	DREAR021
OWNR02	DDATR022	DTIMR022	DREAR022
OWNR02	DDATR023	DTIMR023	DREAR023
OWNR02	DDATR024	DTIMR024	DREAR024
OWNR02	DDATR025	DTIMR025	DREAR025
OWNR02	DDATR026	DTIMR026	DREAR026
OWNR02	DDATR027	DTIMR027	DREAR027
OWNR02	DDATR028	DTIMR028	DREAR028
OWNR02	DDATR029	DTIMR029	DREAR029
OWNR03	DDATR030	DTIMR030	DREAR015
<b>Total Downtime</b>	<b>TOTLDOWN</b>		

Other Comments	
Number of Comment Lines	TOTCOM
	OCOMR016
	OCOMR017
	OCOMR018
	OCOMR019
	OCOMR020
	OCOMR021
	OCOMR022
	OCOMR023
	OCOMR024
	OCOMR025
	OCOMR026
	OCOMR027
	OCOMR028
	OCOMR029
	OCOMR030

**Test Method D5704  
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Form 4B**

**Unscheduled Downtime & Maintenance Summary**

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE		

Number of Downtime Occurrences			DWNOCR
Test Hours	Date	Downtime	Reasons
DOWNR03	DDATR031	DTIMR031	DREAR031
DOWNR03	DDATR032	DTIMR032	DREAR032
DOWNR03	DDATR033	DTIMR033	DREAR033
DOWNR03	DDATR034	DTIMR034	DREAR034
DOWNR03	DDATR035	DTIMR035	DREAR035
DOWNR03	DDATR036	DTIMR036	DREAR036
DOWNR03	DDATR037	DTIMR037	DREAR037
DOWNR03	DDATR038	DTIMR038	DREAR038
DOWNR03	DDATR039	DTIMR039	DREAR039
DOWNR04	DDATR040	DTIMR040	DREAR040
DOWNR04	DDATR041	DTIMR041	DREAR041
DOWNR04	DDATR042	DTIMR042	DREAR042
DOWNR04	DDATR043	DTIMR043	DREAR043
DOWNR04	DDATR044	DTIMR044	DREAR044
DOWNR04	DDATR045	DTIMR045	DREAR045
<b>Total Downtime</b>		TOTLDOWN	

Other Comments	
Number of Comment Lines	TOTCOM
	OCOMR031
	OCOMR032
	OCOMR033
	OCOMR034
	OCOMR035
	OCOMR036
	OCOMR037
	OCOMR038
	OCOMR039
	OCOMR040
	OCOMR041
	OCOMR042
	OCOMR043
	OCOMR044
	OCOMR045

**Test Method D5704  
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Form 5**

**Gear Rating**

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE	<b>Rated By:</b> RINIT	

**Carbon/Varnish:**

Large Gear						Small Gear					
Front			Rear			Front			Rear		
%	Rate	Merit	%	Rate	Merit	%	Rate	Merit	%	Rate	Merit
CVLFP1	CVLFR1	CVLFM1	CVLRP1	CVLRR1	CVLRM1	CVSFP1	CVSFR1	CVSFM1	CVSRP1	CVSRR1	CVSRM1
CVLFP2	CVLFR2	CVLFM2	CVLRP2	CVLRR2	CVLRM2	CVSFP2	CVSFR2	CVSFM2	CVSRP2	CVSRR2	CVSRM2
CVLFP3	CVLFR3	CVLFM3	CVLRP3	CVLRR3	CVLRM3	CVSFP3	CVSFR3	CVSFM3	CVSRP3	CVSRR3	CVSRM3
CVLFP4	CVLFR4	CVLFM4	CVLRP4	CVLRR4	CVLRM4	CVSFP4	CVSFR4	CVSFM4	CVSRP4	CVSRR4	CVSRM4
CVLFP5	CVLFR5	CVLFM5	CVLRP5	CVLRR5	CVLRM5	CVSFP5	CVSFR5	CVSFM5	CVSRP5	CVSRR5	CVSRM5
<b>Total</b>		CVLFT	<b>Total</b>		CVLRT	<b>Total</b>		CVSFT	<b>Total</b>		CVSRT

**Large Gear Average of Carbon/Varnish Only** RVAR VAR

**Sludge:**

Small Gear Rating for Information Only

Large Gear						Small Gear					
Front			Rear			Front			Rear		
Depth	% Cover	Volume Factor	Depth	% Cover	Volume Factor	Depth	% Cover	Volume Factor	Depth	% Cover	Volume Factor
<b>CL</b>	SLFPC1	SLFVF1	<b>CL</b>	SLRPC1	SLRVF1	<b>CL</b>	SSFPC1	SSFVF1	<b>CL</b>	SSRPC1	SSRVF1
<b>1/4A</b>	SLFPC2	SLFVF2	<b>1/4A</b>	SLRPC2	SLRVF2	<b>1/4A</b>	SSFPC2	SSFVF2	<b>1/4A</b>	SSRPC2	SSRVF2
<b>1/2A</b>	SLFPC3	SLFVF3	<b>1/2A</b>	SLRPC3	SLRVF3	<b>1/2A</b>	SSFPC3	SSFVF3	<b>1/2A</b>	SSRPC3	SSRVF3
<b>3/4A</b>	SLFPC4	SLFVF4	<b>3/4A</b>	SLRPC4	SLRVF4	<b>3/4A</b>	SSFPC4	SSFVF4	<b>3/4A</b>	SSRPC4	SSRVF4
<b>A</b>	SLFPC5	SLFVF5	<b>A</b>	SLRPC5	SLRVF5	<b>A</b>	SSFPC5	SSFVF5	<b>A</b>	SSRPC5	SSRVF5
<b>AB</b>	SLFPC6	SLFVF6	<b>AB</b>	SLRPC6	SLRVF6	<b>AB</b>	SSFPC6	SSFVF6	<b>AB</b>	SSRPC6	SSRVF6
<b>B</b>	SLFPC7	SLFVF7	<b>B</b>	SLRPC7	SLRVF7	<b>B</b>	SSFPC7	SSFVF7	<b>B</b>	SSRPC7	SSRVF7
<b>BC</b>	SLFPC8	SLFVF8	<b>BC</b>	SLRPC8	SLRVF8	<b>BC</b>	SSFPC8	SSFVF8	<b>BC</b>	SSRPC8	SSRVF8
<b>C</b>	SLFPC9	SLFVF9	<b>C</b>	SLRPC9	SLRVF9	<b>C</b>	SSFPC9	SSFVF9	<b>C</b>	SSRPC9	SSRVF9
<b>D</b>	SLFPC10	SLFVF10	<b>D</b>	SLRPC10	SLRVF10	<b>D</b>	SSFPC10	SSFVF10	<b>D</b>	SSRPC10	SSRVF10
<b>Total</b>	SLFPCT	SLFVFT	<b>Total</b>	SLRPCT	SLRVFT	<b>Total</b>	SSFPC10	SSFVFT	<b>Total</b>	SSRPCT	SSRVFT
<b>Merit Rating</b>		SLFMT	<b>Merit Rating</b>		SLRMT	<b>Merit Rating</b>		SSFMT	<b>Merit Rating</b>		SSRMT

**Four Side Average of Sludge**

RSLG SLG

Large Gear Front – Stamped GA50  
Rear – No Markings

Small Gear Front – Stamped GA34  
Rear – No Markings

**Sludge:**

Rate total flat area excluding gear teeth, washer/nut area and 3/4" wide strip area using CRC Manual 20

**Varnish/Carbon:**

CRC Method – 3/4 in. Wide strip across gear excluding gear teeth and washer/nut area.

CRC Rust/Varnish color intensity factors 10.0 to 1.0

Carbon Rating: merit rating

Trace Carbon: 0.85

Light Carbon: 0.75

Medium Carbon: 0.50

Heavy Carbon: 0.0



**Test Method D5704  
(L-60-1)  
Form 6**

**Operational Validity Summary**

<b>Lab:</b> LAB	<b>Stand:</b> STAND	<b>Stand Run:</b> RSTRUN STRUN
<b>Oil Code:</b> CMIR OILCODE		

Controlled Parameter	Warm-Up			Actual Test		
	Allowable % Out	This Test % Out	Actual Time Out min:s	Allowable % Out	This Test % Out	Actual Time Out min:s
<b>Oil Temperature</b>				<b>5</b>	OILTPOUT	ATOTOT
<b>Air Flow</b>	<b>10</b>	ARFLWRM	ATOWAF	<b>5</b>	ARFLWOUT	ATOTAF
<b>Alternator Load</b>	<b>10</b>	ALTLDWRM	ATOWAL	<b>5</b>	ALTLDOUT	ATOTAL
<b>Large Gear Speed</b>	<b>5</b>	LGRSPDWM	ATOWLGS	<b>2</b>	LGRSPDOT	ATOTLGS