

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

Version L601 VERSION 20050418 BETA
Conducted For
 TSTSPON1
 TSTSPON2

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

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

In my opinion this test OPVALID 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.

^A 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

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

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

Reference Oil Test

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

Non-Reference Test Result Summary Sheet

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

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

Non-Reference Oil Test

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

Operational Summary

Lab: LAB	Stand: STAND	Stand Run: RSTRUN STRUN
Oil Code: CMIR OILCODE		

OPERATIONS	TOTAL	AVERAGE	MINIMUM	MAXIMUM
Test Length, h	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		
MEASUREMENTS				
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			

TEST TIME, h	VISCOSITY, cSt @ 100°C (D 445)
0	VNEW
50	V50

**Test Method D5704
(L-60-1)
Form 4**

Downtime and Comments

Lab: LAB	Stand: STAND	Stand Run: RSTRUN STRUN
Oil Code: 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
Total Downtime		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
(L-60-1)
Form 4A**

Downtime and Comments

Unscheduled Downtime & Maintenance Summary

Lab:	LAB	Stand:	STAND	Stand Run:	RSTRUN	STRUN
Oil Code:	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
Total Downtime	OTLDOWN		

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
(L-60-1)
Form 4B**

Unscheduled Downtime & Maintenance Summary

Lab: LAB	Stand: STAND	Stand Run: RSTRUN STRUN
Oil Code: 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
Total Downtime	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
(L-60-1)
Form 5**

Gear Rating

Lab: LAB	Stand: STAND	Stand Run: RSTRUN STRUN
Oil Code: CMIR OILCODE	Rated By: 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
Total		CVLFT	Total		CVLRT	Total		CVSFT	Total		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
CL	SLFPC1	SLFVF1	CL	SLRPC1	SLRVF1	CL	SSFPC1	SSFVF1	CL	SSRPC1	SSRVF1
1/4A	SLFPC2	SLFVF2	1/4A	SLRPC2	SLRVF2	1/4A	SSFPC2	SSFVF2	1/4A	SSRPC2	SSRVF2
1/2A	SLFPC3	SLFVF3	1/2A	SLRPC3	SLRVF3	1/2A	SSFPC3	SSFVF3	1/2A	SSRPC3	SSRVF3
3/4A	SLFPC4	SLFVF4	3/4A	SLRPC4	SLRVF4	3/4A	SSFPC4	SSFVF4	3/4A	SSRPC4	SSRVF4
A	SLFPC5	SLFVF5	A	SLRPC5	SLRVF5	A	SSFPC5	SSFVF5	A	SSRPC5	SSRVF5
AB	SLFPC6	SLFVF6	AB	SLRPC6	SLRVF6	AB	SSFPC6	SSFVF6	AB	SSRPC6	SSRVF6
B	SLFPC7	SLFVF7	B	SLRPC7	SLRVF7	B	SSFPC7	SSFVF7	B	SSRPC7	SSRVF7
BC	SLFPC8	SLFVF8	BC	SLRPC8	SLRVF8	BC	SSFPC8	SSFVF8	BC	SSRPC8	SSRVF8
C	SLFPC9	SLFVF9	C	SLRPC9	SLRVF9	C	SSFPC9	SSFVF9	C	SSRPC9	SSRVF9
D	SLFPC10	SLFVF10	D	SLRPC10	SLRVF10	D	SSFPC10	SSFVF10	D	SSRPC10	SSRVF10
Total	SLFPCT	SLFVFT	Total	SLRPCT	SLRVFT	Total	SSFPC10	SSFVFT	Total	SSRPCT	SSRVFT
Merit Rating		SLFMT	Merit Rating		SLRMT	Merit Rating		SSFMT	Merit Rating		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

Lab: LAB	Stand: STAND	Stand Run: RSTRUN STRUN
Oil Code: 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
Oil Temperature				5	OILTPOUT	ATOTOT
Air Flow	10	ARFLWRM	ATOWAF	5	ARFLWOUT	ATOTAF
Alternator Load	10	ALTLDWRM	ATOWAL	5	ALTLDOUT	ATOTAL
Large Gear Speed	5	LGRSPDWM	ATOWLGS	2	LGRSPDOT	ATOTLGS