

**Report Forms
L-42**

Version:
Conducted For:

	V = Valid
	I = Invalid
	N = Results Cannot Be Interpreted (See Comment Section)

	NR = Non-Reference Test Oil
	RO = Reference Oil Result

Test Number			
Test Stand:		Stand Run Number:	
Date Completed:		EOT Time:	
Oil Code:			
Formulation/Stand Code:			
Alternate Codes:			
Test Version ^A :			

<p>In my opinion this test _____ been conducted in a valid manner in accordance with the latest draft of L-42 procedure and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.</p>

^A Standard or Canadian

Submitted By:

Testing Laboratory

Signature

Typed Name

Title

Section

**L-42
Form 1
Test Result Summary**

Lab:	Stand No.:	Stand Run No.:	TMC Oil Code (reference only):
Oil Code:			Lab Oil Code:

Test Date Started	Test Date Completed	Drive Side Scoring (%)		Coast Side Scoring (%)			Coast Side Torque (lbf-ft)	
		EOT Pinion	EOT Ring	EOT Pinion	EOT Ring	Shock Series 1 Ring	Shock Series 1 (Average)	Shock Series 2 (Average)
Conditioning 2 Test Time:		Conditioning 4 Test Time:			End of Test Time:		Total Test Minutes:	
Ring Batch:		Pinion Batch:			Latest Information Letter Run Against:			

Stand Reference Oil Test History In Chronological Order												
	Test Date Started	Test Date Completed	Stand Run No.	CMIR No.	TMC Oil No.	Drive Side Scoring (%)		Coast Side Scoring (%)			Coast Side Torque (lbf-ft)	
						EOT Pinion	EOT Ring	EOT Pinion	EOT Ring	Shock Series 1 Ring	Shock Series 1 (Average)	Shock Series 2 (Average)
Discrimination ^A												
Calibration Sequence Passing Tests Only ^B												
Passing Reference Oil Test Average												

^AOnly for non-reference tests.

^BFor non-reference and discrimination tests only.

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Form 2
Conditioning Phase Operational Data Summary

Lab:	Stand No.:	Stand Run No.:
Oil Code:		

Operational Data				
	Conditioning 1		Conditioning 3	
	Wheel Speed (r/min)	Torques (lbf-ft)	Wheel Speed (r/min)	Torques (lbf-ft)
Maximum				
Minimum				
Average				

Operational Data					
		Conditioning 2		Conditioning 4	
		Wheel Speed (r/min)	Torques (lbf-ft)	Wheel Speed (r/min)	Torques (lbf-ft)
Drive Side	Maximum				
	Minimum				
	Average				
Coast Side	Maximum				
	Minimum				
	Average				

Lubricant Temperature Data				
Phase	Specification	Average	Minimum	Maximum
Gear Conditioning (After reaching 215 °F)	225 ± 10 °F			

Percent Deviation						
Parameter	Entire Conditioning Phase		Conditioning Phase 1		Conditioning Phase 3	
	Limits	% Out	Limits	% Out	Limits	% Out
Axle Oil Temp.	5.0%					
Axle r/min			5.0%		5.0%	
Pinion Torque			5.0%		5.0%	

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Form 3
Shock Series Operational Summary**

Lab:	Stand No.:	Stand Run No:
Oilcode:		

Stand Set-up				
	Shock Series 1		Shock Series 2	
Parameter	Acceleration	Deceleration	Acceleration	Deceleration
Potentiometer Setting				
Stand Set-up Version				

Gear Loading Data							
Gear Side		Shock Series 1			Shock Series 2		
		Wheel Speed (r/min)	Torques (lbf-ft)	Cycle Time (Seconds)	Wheel Speed (r/min)	Torques (lbf-ft)	Cycle Time (Seconds)
Drive	Maximum						
	Minimum						
	Average						
Coast	Maximum						
	Minimum						
	Average						

Lubricant Temperature Data			
Phase	Specification	Start Value	Maximum
Shock Series 1			
Shock Series 2			

**L-42
Form 4
Measurement Summary**

Lab:	Stand No.:	Stand Run No.:
Oil Code:		

Axle Codes				
Assembly Date	Match No.	Serial Number	Pinion Batch	Ring Batch

Contact Pattern Measurements			
		Drive Side	Coast -Side
Length Rating	As Received		
	As Tested		
Flank Rating	As Received		
	As Tested		
Contact Pattern Rater Initials			

Test Axle Build Data									
Backlash (in.)	Mfg. Specification	Mfg. Measurement	Laboratory's Position Measurements						
			1	2	3	4	Min	Max	Avg.
Initial	.004 -.012 in.								
Final									
Increase									
Initial Pinion Torque (lbf -in)			Break						
			Turn						

Inspection	Ring% Scoring		Pinion % Scoring	
	Drive Side	Coast Side	Drive Side	Coast Side
Inspection 1				
Inspection 2				
EOT				
EOT Rating Date			EOT Rater Initials	

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Form 6

Conditioning Phase 1 & 2 – Wheel Speed vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 7

Conditioning Phase 3 & 4 – Wheel Speed vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 8

Shock Series 1 – Wheel Speed vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 9

Shock Series 2 – Wheel Speed vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 10

Conditioning Phase 1 & 2 – Pinion Torque vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 11

Conditioning Phase 3 & 4 – Pinion Torque vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 12

Conditioning Phase 2 – Pinion Torque vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 13

Conditioning Phase 4 – Pinion Torque vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 14

Shock Series 1 – Pinion Torque vs. Time (5 shocks)

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 15

Shock Series 2 – Pinion Torque vs. Time (10 shocks)

Lab:	Stand No.:	Stand Run No.:
Oilcode:		

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Form 16

Axle Oil Temperature vs. Time

Lab:	Stand No.:	Stand Run No.:
Oilcode:		