

**Report Forms  
L-42-1**

**Version:**

Conducted For:

	<b>V</b> = Valid
	<b>I</b> = Invalid
	<b>N</b> = Results Cannot Be Interpreted (See Comment Section)

	<b>NR</b> = Non-Reference Test Oil
	<b>RO</b> = Reference Oil Result

<b>Test Number</b>			
Test Stand:		Stand Run Number:	
Date Completed:		EOT Time:	
Oil Code:			
Formulation/Stand Code:			
Alternate Codes:			
Test Version <sup>A</sup> :			

In my opinion this test \_\_\_\_\_ been conducted in a valid manner in accordance with the ASTM RR: \_\_\_\_\_ and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.

<sup>A</sup> Standard or Canadian

Submitted By:

\_\_\_\_\_ Testing Laboratory

\_\_\_\_\_ Signature

\_\_\_\_\_ Typed Name

\_\_\_\_\_ Title

\_\_\_\_\_ Section

**L-42-1  
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	End Of Test Time	Total Test Minutes	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)
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)
<b>Discrimination</b> <sup>A</sup>												
<b>Calibration Sequence Passing Tests Only</b> <sup>B</sup>												
<b>Passing Reference Oil Test Average</b>												

<sup>A</sup>Only for non-reference tests.

<sup>B</sup>For non-reference and discrimination tests only.

**L-42-1  
Form 2  
Conditioning Phase Operational Data Summary**

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

<b>Operational Data</b>				
	<b>Conditioning 1</b>		<b>Conditioning 3</b>	
	Wheel Speed (r/min)	Torques (lbf-ft)	Wheel Speed (r/min)	Torques (lbf-ft)
<b>Average</b>				

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

<b>Lubricant Temperature Data</b>				
Phase	Specification	Average	Minimum	Maximum
<b>Gear Conditioning (After reaching 220 °F)</b>	225 ± 5 °F			

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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						

Phase	Specification	Start Value	Maximum
Shock Series 1	200 ± 5 °F		
Shock Series 2	< 280 °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 4  
Measurement Summary**

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

Axle Codes			
Assembly Date	Match No.	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.)	Specification	Average	Position Measurements				Minimum	Maximum
			1	2	3	4		
Initial	.004 -.009 in.							
Final								
Increase			Break			Turn		
Initial Pinion Torque (lbf -in)								

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:		