

**TEST METHOD D6121  
L-37 Load Evaluation**

**VERSION**

**CONDUCTED FOR:**

	<b>V = Valid</b>
	<b>I = Invalid</b>
	<b>N = Results cannot be interpreted(Refer to comment section)</b>

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

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

In my opinion this test been conducted in a valid manner in accordance with Test Method D6121 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> Nonlubrited or Lubrited

<sup>B</sup> Standard or Canadian

Submitted By:

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

\_\_\_\_\_  
Signature

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Section

**TEST METHOD D6121**  
**L-37**  
**Form 1**  
**Test Result Summary Sheet**

<b>Oil Test</b>			
Lab:	Stand:		Stand Run :
Start Date:	Date Completed:	EOT Time:	Test Length:
TMC Oil Code:	Laboratory Oil Code:		Viscosity Grade:
Oil Code:			
Formulation Stand Code:			
Latest Information Letter Test Was Run Under:			
Test Hardware:	Test Version:		
Pinion Batch:	Ring Batch:		

<b>Last Reference Oil Calibrating Stand Information - Fill Out For Non-reference Oil Tests Only</b>			
Stand:	Stand Run:	TMC Oil Code:	Date Completed:
Pinion Batch:		Ring Batch:	
Test Hardware:		Test Version:	

	<b>Ring Gear Results</b>				
	<b>Wear</b>	<b>Rippling</b>	<b>Ridging</b>	<b>Pitting/Spalling</b>	<b>Scoring</b>
Original Merit Results <sup>C</sup>					
Transformed Results					
Correction Factor					
Corrected Transformed Results					
Severity Adjustment <sup>A</sup>					
Final Transformed Results					
Final Merit Results					

	<b>Pinion Gear Results</b>				
	<b>Wear</b>	<b>Rippling</b>	<b>Ridging</b>	<b>Pitting/Spalling</b>	<b>Scoring</b>
Original Merit Results <sup>B,C</sup>					
Transformed Results					
Correction Factor					
Corrected Transformed Results					
Severity Adjustment <sup>A</sup>					
Final Transformed Results					
Final Merit Results					

<sup>A</sup> AT THE PRESENT TIME THERE ARE NO SEVERITY ADJUSTMENTS

<sup>B</sup> WITH ANY APPLICABLE EXCLUSIONS APPLIED

<sup>C</sup> IF TOOTH BREAKAGE OCCURS, LEAVE RESULTS BLANK AND REPORT IN COMMENT SECTION

## TEST METHOD D6121

L-37

## **Form 2**

## **Gear Tooth Surface Condition**

Lab:	Stand:	Stand Run:
Oil Code:		Test Version:

Gear Batch Identification		
Test Hardware:	Pinion Batch:	Ring Batch:
Match Number:	Serial Number:	Assemble Date:
Pattern Contact Length Rating:		Pattern Contact Flank Rating:

Gear Test Phase – After Completion of Pinion and Ring Gear Drive Side Inspection			
Rater's Initials:			
Gear Condition	Original Ring Rating	Original Pinion Rating	
Burnish			
Discoloration			
Corrosion			
Deposits			
	Original Ring Rating	Original Pinion Rating	Pinion Rating With Exclusion Applied If Applicable
Wear			
Rippling			
Ridging			
Pitting/Spalling			
Scoring			

**TEST METHOD D6121****L-37****Form 3****Operational Summary Sheet**

Lab:	Stand :	Stand Run:
Oil Code:	Test Version:	

Pinion Torque Checks – Full Axle Assembly		
	Break	Turn
Before Test (lbf-in.)		
After Test - hot (lbf-in.)		
After Test - cool (lbf-in.)		

Backlash Measurements							
	Laboratory's Position Measurements						
	1	2	3	4	Minimum	Maximum	Average
Before Test (in.)							
After Test (in.)							
Difference (in.)							

  

Manufacturer's Measurements							
Manufacturer's Specification			Manufacturer's Measurements				
0.004 – 0.012 (in.)							

General Operating Conditions				
Gear Conditioning Phase:	Start	Finish	Average	Total
1. Time (hh:mm)				
Time (mmmmmm)				
	Maximum	Minimum	Average	
2. Gear-lubricant Temperature (°F)				
3. Dyno Torque 1 (lbf-ft)				
Dyno Torque 2 (lbf-ft)				
4. Dyno Speed 1 (r/min)				
Dyno Speed 2 (r/min)				
Gear Testing Phase:				
1. Time (hh:mm)				
Time (mmmmmm)				
	Maximum	Minimum	Average	
2. Gear-lubricant Temperature (°F)				
3. Dyno Torque 1 (lbf-ft)				
Dyno Torque 2 (lbf-ft)				
4. Dyno Speed 1 (r/min)				
Dyno Speed 2 (r/min)				

**TEST METHOD D6121**  
**L-37**  
**Form 4**

Lab:	Stand:	Stand Run:
Oil Code:		
Test Hardware:		Test Version:

## **Test Lost Time:**

Record the time shutdown, time off test conditions, early inspections/termination with reason and minimum oil temperature in °F.

## TEST METHOD D6121

L-37

## **Form 4A**

## **Lost Time and Comments Sheet**

Lab:	Stand:	Stand Run:
Oil Code:		
Test Hardware:		Test Version:

### **Test Lost Time:**

Record the time shutdown, time off test conditions, early inspections/termination with reason and minimum oil temperature in degrees °F.

## TEST METHOD D6121

L-37

## **Form 4B**

## **Lost Time and Comments Sheet**

Lab:	Stand:	Stand Run:
Oil Code:		
Test Hardware:	Test Version:	

### **Test Lost Time:**

Record the time shutdown, time off test conditions, early inspections/termination with reason and minimum oil temperature in degrees °F.

**TEST METHOD D6121**  
**L-37**  
**Form 5**  
**Operational Validity Summary**

Lab:	Stand:	Stand Run:
Oil Code:		
Test Hardware:		Test Version:

Controlled Parameter	Gear Conditioning			Gear Testing		
	Allowable % Out	This Test % Out	Actual Time Out min:s	Allowable % Out	This Test % Out	Actual Time Out min:s
Gear Oil Temperature	5			5		
Wheel Speed	5			5		
Wheel Speed 2	5			5		
Dyno Load	5			5		
Dyno Load 2	5			5		