

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

VERSION

CONDUCTED FOR:

| | |
|--|--|
| | V = Valid |
| | I = Invalid |
| | N = Results cannot be interpreted(Refer to comment section) |

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

| | | | |
|------------------------------|--|-----------------------------|--|
| Test Number | | | |
| Test Stand: | | Stand Run Number: | |
| Date Completed: | | Time Completed: | |
| Oil Code: | | | |
| Formulation/Stand Code: | | | |
| Alternate Codes: | | | |
| Test Hardware ^A : | | Test Version ^B : | |

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.

^A Nonlubrited or Lubrited

^B Standard or Canadian

Submitted By: _____

_____ Testing Laboratory

_____ Signature

_____ Typed Name

_____ Title

_____ Section

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

| Oil Test | | | |
|---|----------------------|------------------|--------------|
| 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: | |

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

| | Ring Gear Results | | | | |
|-------------------------------------|-------------------|----------|---------|------------------|---------|
| | Wear | Rippling | Ridging | Pitting/Spalling | Scoring |
| Original Merit Results ^C | | | | | |
| Transformed Results | | | | | |
| Correction Factor | | | | | |
| Corrected Transformed Results | | | | | |
| Severity Adjustment ^A | | | | | |
| Final Transformed Results | | | | | |
| Final Merit Results | | | | | |

| | Pinion Gear Results | | | | |
|---------------------------------------|---------------------|----------|---------|------------------|---------|
| | Wear | Rippling | Ridging | Pitting/Spalling | Scoring |
| Original Merit Results ^{B,C} | | | | | |
| Transformed Results | | | | | |
| Correction Factor | | | | | |
| Corrected Transformed Results | | | | | |
| Severity Adjustment ^A | | | | | |
| Final Transformed Results | | | | | |
| Final Merit Results | | | | | |

^A AT THE PRESENT TIME THERE ARE NO SEVERITY ADJUSTMENTS

^B WITH ANY APPLICABLE EXCLUSIONS APPLIED

^C IF TOOTH BREAKAGE OCCURS, LEAVE RESULTS BLANK AND REPORT IN COMMENT SECTION

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 (mmmm) | | | | |
| | 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 (mmmm) | | | | |
| | 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 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 | | |