**A2. Report Forms**
**L-42**
**VERSION** ***20020220***

CONDUCTED FOR

| | |
|---|---|
| | V = VALID |
| | I = INVALID |
| | N = RESULTS CANNOT BE INTERPRETED (Refer To Comment Section) |

| | | | |
|---|---|---|---|
| Test Number | | | |
| Test Stand: | | Stand Run Number: | |
| Date Completed: | | EOT Time: | |
| Oil Code[A]: | | | |
| Formulation/Stand Code: | | | |
| Alternate Codes: | | | |

In my opinion this test been conducted in a valid manner in accordance with the STP 512A ASTM Test Method and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.

[A] CMIR or Non-Reference Oil Code

SUBMITTED BY: _____
Testing Laboratory

_____
Signature

_____
Typed Name

_____
Title

_____
Section

**Fig. A2.1 TEST REPORT COVER**

**L-42**

**FORM 1**

**TEST RESULT SUMMARY**

| TEST LAB |
|---|
| TEST STAND NO. |

| TEST DATE STARTED | TEST DATE COMPLETED | END OF TEST TIME | TOTAL TEST MINUTES | STAND RUN NO. | OIL CODE NO. | LABORATORY OIL CODE | COAST SIDE % SCORING | | | COAST SIDE TORQUE (lbf-ft) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | EOT PINION | EOT RING | SEQ 2 RING | SEQUENCE 2 | SEQUENCE 4 |
| | | | | | | | | | | | |

**Information Letters Number:**

**Formulation / Stand Code:**

STAND REFERENCE OIL TEST HISTORY IN CHRONOLOGICAL ORDER

| | TEST DATE STARTED | TEST DATE COMPLETED | END OF TEST TIME | TOTAL TEST MINUTES | STAND RUN NO. | CMIR NO. | TMC OIL NO. | LABORATORY OIL CODE | COAST SIDE % SCORING | | | COAST SIDE TORQUE (lbf-ft) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | EOT PINION | EOT RING | SEQ 2 RING | SEQUENCE 2 | SEQUENCE 4 |
| [A] Discrimination | | | | | | | | | | | | | |
| [B] Calibration Sequence Passing Tests Only | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | **AVERAGE FOR PASSING REFERENCE OIL TESTS** | | | | | | | | | |

[A] Only for non-reference tests.

[B] For non-reference and discrimination tests only.

**Fig. A2.2 TEST RESULT SUMMARY**

**L-42**
**FORM 2**

## OPERATIONAL SUMMARY

| LAB | STAND NO. |
|---|---|
| OIL CODE | STAND RUN NO. |

**GENERAL OPERATION CONDITIONS**

**1. GEAR LOADING DATA**

| | | SEQUENCE 2 | | SEQUENCE 4 | |
|---|---|---|---|---|---|
| | | Torques lbf-ft | Cycle Time Second | Torques lbf-ft | Cycle Time Second |
| **Drive Side** | Maximum | | | | |
| | Minimum | | | | |
| | Average | | | | |
| **Coast Side** | Maximum | | | | |
| | Minimum | | | | |
| | Average | | | | |

**2. LUBRICANT TEMPERATURE DATA**

| Phase | Specification | Average Value | Minimum Value | Maximum Value |
|---|---|---|---|---|
| Sequence 1* | 225 ± 5 ºF | | | |

| | Starting | | Maximum Value |
|---|---|---|---|
| | Specification | Value | |
| Sequence 2 | 200 ± 5 ºF | | |
| Sequence 4 | < 280 ºF | | |

* Values after reaching 225 ºF

**3. TEST AXLE DATA**

| a. Backlash | Maximum | Minimum | Average |
|---|---|---|---|
| Initial (in.) | | | |
| Final (in.) | | | |
| Increase (in.) | | | |
| b. Initial Pinion Torque (lbf -in) | | Break | Turn |

RATING DATE _____ RATER INITIALS _____

**Fig. A2.3 OPERATIONAL SUMMARY**

**L-42**
**FORM 3**

## MEASUREMENT SUMMARY

| | |
|---|---|
| LAB | STAND NO. |
| OIL CODE | STAND RUN NO. |

**AXLE CODES**

| ASSEMBLY DATE | MATCH NO. | PINION BATCH | RING BATCH |
|---|---|---|---|
| | | | |

**MEASUREMENTS**

| DRIVE SIDE CONTACT PATTERN (Length Rating) | | | | COAST SIDE CONTACT PATTERN (Length Rating) | | | |
|---|---|---|---|---|---|---|---|
| As Received | | As Tested | | As Received | | As Tested | |
| DRIVE SIDE CONTACT PATTERN (Flank Rating) | | | | COAST SIDE CONTACT PATTERN (Flank Rating) | | | |
| As Received | | As Tested | | As Received | | As Tested | |
| OPERATOR INIT | | | | OPERATOR INIT | | | |
| INITIAL BACKLASH (in.) | | | | | | | |
| FINAL BACKLASH (in.) | | | | | | | |

**TEST CONDITIONS**

| BREAK-IN PROCEDURES DESIGNATION | | | | |
|---|---|---|---|---|
| | Sequence 2 | Unit of Measure | Sequence 4 | Unit of Measure |
| Acceleration Rate | | | | |
| Deceleration Rate | | | | |

**INSPECTIONS**

| | RING % SCORE | | PINION % SCORE | |
|---|---|---|---|---|
| | Drive Side | Coast Side | Drive Side | Coast Side |
| Break-In | | | | |
| 1st Noise Check | | | | |
| 2nd Noise Check | | | | |
| Sequence 3 | | | | |
| E.O.T. | | | | |

**Fig. A 2.4 MEASUREMENT SUMMARY**

**L-42**
**FORM 4**

## DOWN TIME AND COMMENTS

| | |
|---|---|
| LAB | STAND NO. |
| OIL CODE | STAND RUN NO. |

| Number of Downtime Occurrences | | | |
|---|---|---|---|
| Test Hours | Date | Downtime | Reasons |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | Total Downtime | |

| Other Comments | | |
|---|---|---|
| Number of Comment Lines | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Fig. A2.5 DOWN TIME AND COMMENTS**