

**Report Forms**  
**Test Method D 7038**  
**L-33-1**  
**Version**  
**Conducted For**

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

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

|                         |               |                   |  |
|-------------------------|---------------|-------------------|--|
| <b>Test Number</b>      |               |                   |  |
| Motoring Stand:         | Storage Box : | Storage Box Run : |  |
| Date Completed:         | EOT Time:     |                   |  |
| Oil Code:               |               |                   |  |
| Formulation/Stand Code: |               |                   |  |
| Alternate Codes:        |               |                   |  |

|                         |   |
|-------------------------|---|
| In my opinion this test | been conducted in a valid manner in accordance with ASTM Test Method D 7038 and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test. |
|-------------------------|---|

Submitted By:

\_\_\_\_\_

Testing Laboratory

\_\_\_\_\_

Signature

\_\_\_\_\_

Typed Name

\_\_\_\_\_

Title

\_\_\_\_\_

Section

**Test Method D 7038  
L-33-1  
Form 1 – Test Results**

|   |                 |                                       |                  |
|---|-----------------|---------------------------------------|------------------|
| Lab:  | Motoring Stand: | Storage Box:                          | Storage Box Run: |
| Start Date:                                   | EOT Date:       | EOT Time:                             | Test Length:     |
| Oil Code:                                     |                 |                                       |                  |
| TMC Oil Code:                                 | Lab Oil Code:   | Viscosity Grade:                      |                  |
| Latest Information Letter Test Was Run Under: |                 |                                       | Gear Version:    |
| Pinion Batch:                                 | Ring Batch:     | Axle Cover Rating Template Serial No. |                  |

| <b>Rater's Initials (After Test) :</b>   |                   |                                   |               |
|--|-------------------|-----------------------------------|---------------|
| Rust/Corrosion   |                   |                                   |               |
| Location   | RUST <sup>A</sup> | WEIGHTING FACTOR                  | WEIGHTED RUST |
| <b>Differential Case:</b>  |                   |                                   |               |
| 1. At Pinion Contact   |                   | * .087                            |               |
| 2. Diff. Gear Contact  |                   | * .193                            |               |
| 3. Diff. Gears (Side)  |                   | * .094                            |               |
| 4. Axle Hsg. Cover   |                   | * .169                            |               |
| 5. Drive Gear (Ring)   |                   | * .079                            |               |
| 6. Drive Pinion  |                   | * .079                            |               |
| <b>Bearing:</b>  |                   |                                   |               |
| 7. Drive Pinion Roller   |                   | * .051                            |               |
| 8. Drive Pinion Cups   |                   | * .083                            |               |
| 9. Diff. Case Roller   |                   | * .071                            |               |
| 10. Diff. Case Cups  |                   | * .094                            |               |
|  |                   | <b>Original Rust, Merit</b>       |               |
|  |                   | <b>Correction Factor, Merit</b>   |               |
|  |                   | <b>Severity Adjustment, Merit</b> |               |
|  |                   | <b>Final Rust, Merit</b>          |               |
| <sup>A</sup> Rust Level (Enter 10, 9, 8, 5 or 0):<br>None = 10<br>Trace = 9 = not more than six spots, each less than 1mm in diameter<br>Light = 8 = seven(7) or more spots less than 1mm in diameter or, one(1) or more spots greater or equal to 1mm in diameter with a combined area of all the spots no greater than 1% of the total rated component surface.<br>Moderate = 5 = in excess of above and up to 5% of considered surface<br>Heavy = 0 = covering more than 5% of considered surface |                   |                                   |               |

|   |
|---|
| <p><b>Remarks:</b> Note presence, location and amount of additional deposit-stain, sludge, etc.</p> |
|---|

**Test Method D7038**

**L-33-1**

**Form 2**

**Last Reference Information & Operational Validity Summary**

|               |                   |
|---------------|-------------------|
| Lab:          | Motoring Stand :  |
| Storage Box : | Storage Box Run : |
| Oil Code :    |                   |

**Last Reference Oil Calibrating Stand Information - Fill Out For Non-reference Oil Tests Only**

|                 |               |                  |
|-----------------|---------------|------------------|
| Motoring Stand: | Storage Box : | Storage Box Run: |
| Date Completed: | TMC Oil Code: |                  |
| Gear Version:   | Pinion Batch: | Ring Batch:      |

Operator's Initials:

| <b>Turning Torques</b> |         |       |
|------------------------|---------|-------|
| Pinion, lbf-in.        | Break:  | Turn: |
| Full Assembly, lbf-in. | Break : | Turn: |

| <b>Warm-Up</b>     |         |         |
|--------------------|---------|---------|
| Time (h)           | Start:  | Finish: |
| Oil Temperature °F | Start : | Finish: |

| <b>Motoring Phase</b> |          |          |          |
|-----------------------|----------|----------|----------|
| Time (h)              | Start:   | Finish:  |          |
| Pinion Speed, r/min   | Average: | Maximum: | Minimum: |
| Oil Temperature, °F   | Average: | Maximum: | Minimum: |

| <b>Storage Phase</b> |          |          |          |
|----------------------|----------|----------|----------|
| Time (h)             | Start :  | Finish:  |          |
| Oil Temperature, °F  | Average: | Maximum: | Minimum: |

| <b>Percent Deviation</b> |                 |                 |                       |                 |                 |                       |
|--------------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|-----------------------|
| Controlled Parameter     | Motoring Phase  |                 |                       | Storage Phase   |                 |                       |
|                          | Allowable % Out | This Test % Out | Actual Time Out min:s | Allowable % Out | This Test % Out | Actual Time Out min:s |
| Oil Temperature          | 5               |                 |                       | 4               |                 |                       |

**Test Method D 7038**  
**L-33-1**  
**Form 3**  
**Pre Test Rating <sup>A</sup>**

|               |                  |
|---------------|------------------|
| Lab:          | Motoring Stand:  |
| Storage Box : | Storage Box Run: |
| Oil Code:     |                  |

Match No.: \_\_\_\_\_ Date: \_\_\_\_\_ Rated By: \_\_\_\_\_

**Differential Case**

Area 1. At Pinion Contact: \_\_\_\_\_

Area 2. At Differential Gear Contact: \_\_\_\_\_

Area 3. Differential Gears (Side Gears): \_\_\_\_\_

Area 4. Axle Housing Cover: \_\_\_\_\_

Area 5. Drive Gears (Ring): \_\_\_\_\_

Area 6. Drive Pinion: \_\_\_\_\_

Area 7. Drive Pinion Rollers: \_\_\_\_\_

Area 8. Drive Pinion Cups: \_\_\_\_\_

Area 9. Differential Case Rollers: \_\_\_\_\_

Area 10. Differential Case Cups: \_\_\_\_\_

<sup>A</sup> After Abrasive Blasting





