

**Test Method D5704  
(L-60-1)**

**Version L601 VERSION 20000126**  
**Conducted For**  
CC  
CC

|   |  |
|---|--|
| C | <b>V = Valid</b>   |
|   | <b>I = Invalid</b>   |
|   | <b>N = Results Cannot be Interpreted. (Refer To Comment Section)</b> |

| <b>Test Number</b>   |  |        |        |
|--|--|--------|--------|
| <b>Test Stand:</b> CCCCC   | <b>Stand Run Number:</b> CCCC CCCC       |        |        |
| <b>Date Completed:</b> YYYYMMDD YYYYMMDD                         | <b>End Of Test Time:</b>                 | HH:MM  | HH:MM  |
| <b>Oil Code<sup>A</sup>:</b> CCCCCC                              | CC |        |        |
| <b>Formulation/Stand Code:</b> CC-CCCCCCCC-C-C-CCCCCC-CC-CC-CCCC |  |        |        |
| <b>Alternate Codes:</b>  | CCCCCC                                   | CCCCCC | CCCCCC |

**In my opinion this test CCCCCCCC been conducted in a valid manner in accordance with Test Method D5704 and the appropriate amendments through the Information Letter System. The remarks included in this report describe anomalies associated with this test.**

<sup>A</sup> CMIR or Non-Reference Oil Code

**Submitted By:**

CC  
**Testing Laboratory**

Signature Image

\_\_\_\_\_  
**Signature**

CC

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

CC

\_\_\_\_\_  
**Title**

CC

\_\_\_\_\_  
**Section**

**Test Method D5704****(L-60-1)****Form 1****Reference Test Result Summary Sheet**

| <b>Lab</b>  | <b>Stand</b>          |                         | <b>Stand Run</b>   |
|---|-----------------------|-------------------------|--------------------|
| CC  | CCCCC                 |                         | CCCC               |
| <b>Start Date</b>                                   | <b>Date Completed</b> | <b>End Of Test Time</b> | <b>Test Length</b> |
| YYYYMMDD  | YYYYMMDD              | HH:MM                   | S12                |
| <b>CMIR</b>   | <b>TMC Oil Code</b>   | <b>Viscosity Grade</b>  | <b>Gear Batch</b>  |
| CCCCCC  | CCCCCC                | CCCCCC                  | CCCCCC             |
| <b>Laboratory Oil Code</b>                          | CCCCCCCCCCCC          |                         |                    |
| <b>Latest Information Letter Test Was Run Under</b> | CCCCCC                |                         |                    |

|                                     | <b>Viscosity Increase (%)</b> | <b>Pentane Insolubles (% wt.)</b> | <b>Toluene Insolubles (% wt.)</b> | <b>Average Carbon/Varnish (merits)</b> | <b>Average Sludge (merits)</b> |
|-------------------------------------|-------------------------------|-----------------------------------|-----------------------------------|--|--------------------------------|
| <b>Original Results</b>             | S12.12                        | S12.12                            | S12.12                            | S12.12                                 | S12.12                         |
| <b>Transformed Results</b>          | S1.1234                       | S1.1234                           | S1.1234                           | S1.1234                                | S1.1234                        |
| <b>Correction Factor</b>            |                               |                                   |                                   |  |                                |
| <b>Corrected Transformed Result</b> |                               |                                   |                                   |  |                                |
| <b>Final Transformed Result</b>     | S1.1234                       | S1.1234                           | S1.1234                           | S1.1234                                | S1.1234                        |
| <b>Final Original Unit Result</b>   | S12.12                        | S12.12                            | S12.12                            | S12.12                                 | S12.12                         |

**Test Method D5704****(L-60-1)****Form 2****Non-Reference Test Result Summary Sheet**

|   |                       |                                    |                    |  |
|---|-----------------------|------------------------------------|--------------------|--|
| <b>Lab</b>  | <b>Stand</b>          |                                    | <b>Stand Run #</b> |  |
| CC  | CCCCC                 |                                    | CCCC               |  |
| <b>Start Date</b>                                   | <b>Date Completed</b> | <b>End of Test Time</b>            | <b>Test Length</b> |  |
| YYYYMMDD  | YYYYMMDD              | HH:MM                              | S12                |  |
| <b>Oil Code</b>                                     |                       |                                    |                    |  |
| CC            |                       |                                    |                    |  |
| <b>Viscosity Grade</b>                              | <b>Gear Batch</b>     | <b>Laboratory Oil Code</b>         |                    |  |
| CCCCCC  | CCCCCC                | CCCCCC                             |                    |  |
| <b>Formulation Stand Code</b>                       |                       | CC-CCCCCCCC-CC-C-C-CCCC-CC-CC-CCCC |                    |  |
| <b>Latest Information Letter Test Was Run Under</b> |                       | CCCCCC                             |                    |  |

|                                     | <b>Viscosity Increase (%)</b> | <b>Pentane Insolubles (% wt.)</b> | <b>Toluene Insolubles (% wt.)</b> | <b>Average Carbon/Varnish (merits)</b> | <b>Average Sludge (merits)</b> |
|-------------------------------------|-------------------------------|-----------------------------------|-----------------------------------|--|--------------------------------|
| <b>Original Results</b>             | AAAAAA                        | AAAAAA                            | AAAAAA                            | AAAAAA                                 | AAAAAA                         |
| <b>Transformed Results</b>          | AAAAAAA                       | AAAAAAA                           | AAAAAAA                           | AAAAAAA                                | AAAAAAA                        |
| <b>Correction Factor</b>            | S1.1234                       | S1.1234                           | S1.1234                           | S1.1234                                | S1.1234                        |
| <b>Corrected Transformed Result</b> | AAAAAAA                       | AAAAAAA                           | AAAAAAA                           | AAAAAAA                                | AAAAAAA                        |
| <b>Severity Adjustment</b>          | S1.1234                       | S1.1234                           | S1.1234                           | S1.1234                                | S1.1234                        |
| <b>Final Transformed Result</b>     | AAAAAAA                       | AAAAAAA                           | AAAAAAA                           | AAAAAAA                                | AAAAAAA                        |
| <b>Final Original Unit Result</b>   | AAAAAA                        | AAAAAA                            | AAAAAA                            | AAAAAA                                 | AAAAAA                         |

**Test Method D5704**

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Form 3

## Operational Summary

|   |                     |                             |
|---|---------------------|-----------------------------|
| <b>Lab:</b> CC  | <b>Stand:</b> CCCCC | <b>Stand Run:</b> CCCC CCCC |
| <b>Oil Code:</b> CCCCCC CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC |                     |                             |

| OPERATIONS                             | TOTAL   | AVERAGE  | MINIMUM | MAXIMUM |
|--|---------|----------|---------|---------|
| <b>Test Length, h</b>                  | S12 S12 |          |         |         |
| <b>Warm-up Time, min</b>               | S12     |          |         |         |
| <b>Air Box Temperature, °F</b>         |         | S12.1    | S12.1   | S12.1   |
| <b>Average Air Flow, mg/min</b>        |         | S1234.12 |         |         |
| <b>Oil Temperature, °F</b>             |         | S12.1    | S12.1   | S12.1   |
| <b>Large Gear Speed, r/min</b>         |         | S12345   |         |         |
| <b>Alternator Load, W</b>              |         | S123.1   |         |         |
| MEASUREMENTS                           |         |          |         |         |
| <b>Catalyst Weight Loss, g</b>         | S1.1234 |          |         |         |
| <b>Catalyst Weight Loss, %</b>         | S1.12   |          |         |         |
| <b>Initial Oil Charge Weight, g</b>    | S12.12  |          |         |         |
| <b>Final Drain Weight, g</b>           | S12.12  |          |         |         |
| <b>Oil Weight Loss, g</b>              | S12.12  |          |         |         |
| <b>Oil Weight Loss, %</b>              | S12.12  |          |         |         |
| <b>Acid Number (Test Method D 664)</b> | S12.12  |          |         |         |

| TEST TIME, h | VISCOSITY, cSt |
|--------------|----------------|
| 0            | S12.12         |
| 50           | AAAAAA         |

## **Test Method D5704**

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## **Form 4**

## Downtime and Comments

|   |                     |                             |
|---|---------------------|-----------------------------|
| <b>Lab:</b> CC  | <b>Stand:</b> CCCCC | <b>Stand Run:</b> CCCC CCCC |
| <b>Oil Code:</b> CCCCCC CCC |                     |                             |

**Test Method D5704  
(L-60-1)  
Form 4A**

## Downtime and Comments

## **Unscheduled Downtime & Maintenance Summary**

|                  |        |  |  |                   |      |      |
|------------------|--------|--|--|-------------------|------|------|
| <b>Lab:</b>      | CC     | <b>Stand:</b>                                | CCCCC  | <b>Stand Run:</b> | CCCC | CCCC |
| <b>Oil Code:</b> | CCCCCC | CC | CC |                   |      |      |

## **Test Method D5704**

(L-60-1)

## **Form 4B**

## **Unscheduled Downtime & Maintenance Summary**

|                  |        |  |  |  |  |  |
|------------------|--------|--|--|--|--|--|
| <b>Lab:</b>      | CC     | <b>Stand:</b>                                | CCCCC                                    | <b>Stand Run:</b>                        | CCCC                                     | CCCC                                     |
| <b>Oil Code:</b> | CCCCCC | CC | CC | CC | CC | CC |

**Test Method D5704**

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**Form 5**

**Gear Rating**

|   |                      |                             |
|---|----------------------|-----------------------------|
| <b>Lab:</b> CC  | <b>Stand:</b> CCCCCC | <b>Stand Run:</b> CCCC CCCC |
| <b>Oil Code:</b> CCCCCCCC CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC |                      | <b>Rated By:</b> CCC        |

**Carbon/Varnish:**

| Large Gear   |       |       |              |       |       | Small Gear   |       |       |              |       |       |
|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|
| Front        |       |       | Rear         |       |       | Front        |       |       | Rear         |       |       |
| %            | Rate  | Merit |
| S12          | S1.12 | S1.12 |
| S12          | S1.12 | S1.12 |
| S12          | S1.12 | S1.12 |
| S12          | S1.12 | S1.12 |
| S12          | S1.12 | S1.12 |
| <b>Total</b> | S1.12 |       | <b>Total</b> | S1.12 |       | <b>Total</b> | S1.12 |       | <b>Total</b> | S1.12 |       |

**Large Gear Average of Carbon/Varnish Only**      S12.12 AAAAA

**Sludge:**

Small Gear Rating for Information Only

| Large Gear          |         |               |                     |         |               | Small Gear          |         |               |                     |         |               |
|---------------------|---------|---------------|---------------------|---------|---------------|---------------------|---------|---------------|---------------------|---------|---------------|
| Front               |         |               | Rear                |         |               | Front               |         |               | Rear                |         |               |
| Depth               | % Cover | Volume Factor |
| CL                  | S12     | S1.12         |
| 1/4A                | S12     | S1.12         |
| 1/2A                | S12     | S1.12         |
| 3/4A                | S12     | S1.12         |
| A                   | S12     | S1.12         |
| AB                  | S12     | S1.12         |
| B                   | S12     | S1.12         |
| BC                  | S12     | S1.12         |
| C                   | S12     | S1.12         |
| D                   | S12     | S1.12         |
| <b>Total</b>        | S12     | S1.12         |
| <b>Merit Rating</b> | S1.12   |               | <b>Merit Rating</b> | S1.12   |               | <b>Merit Rating</b> | S1.12   |               | <b>Merit Rating</b> | S1.12   |               |

**Four Side Average of Sludge**

S12.12 AAAAA

Large Gear Front – Stamped GA50  
Rear – No Markings

Small Gear Front – Stamped GA34  
Rear – No Markings

**Sludge:**

Rate total flat area excluding gear teeth, washer/nut area and  $\frac{3}{4}$ " wide strip area using CRC Manual 20

**Varnish/Carbon:**

CRC Method –  $\frac{3}{4}$  in. Wide strip across gear excluding gear teeth and washer/nut area.

CRC Rust/Varnish color intensity factors 10.0 to 1.0

Carbon Rating: merit rating

Trace Carbon: 0.85

Light Carbon: 0.75

Medium Carbon: 0.50

Heavy Carbon: 0.0

**Test Method D5704****(L-60-1)****Form 6****Operational Validity Summary**

|   |                     |                             |
|---|---------------------|-----------------------------|
| <b>Lab:</b> CC  | <b>Stand:</b> CCCCC | <b>Stand Run:</b> CCCC CCCC |
| <b>Oil Code:</b> CCCCCC CCC |                     |                             |

| Controlled Parameter    | Warm-Up         |                 |                       | Actual Test     |                 |                       |
|-------------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|-----------------------|
|                         | Allowable % Out | This Test % Out | Actual Time Out min:s | Allowable % Out | This Test % Out | Actual Time Out min:s |
| <b>Oil Temperature</b>  |                 |                 |                       | <b>5</b>        | S123.1          | CCCCCC                |
| <b>Air Flow</b>         | <b>10</b>       | S123.1          | CCCCCC                | <b>5</b>        | S123.1          | CCCCCC                |
| <b>Alternator Load</b>  | <b>10</b>       | S123.1          | CCCCCC                | <b>5</b>        | S123.1          | CCCCCC                |
| <b>Large Gear Speed</b> | <b>5</b>        | S123.1          | CCCCCC                | <b>2</b>        | S123.1          | CCCCCC                |