

**WEAR** CONTAMINATION **FLUID CONDITION** 

**NORMAL NORMAL NORMAL** 

[20242914]

## Cummins 1055 First St Component Natural Gas Engine

**Generic Engine Oil (9 QTS)** 

| RECOMMENDATION  | Toot                    | LIOM     | Mathad      | Limit/Ahn | Current                  | Lliatomid | LliatamiO |
|---|-------------------------|----------|-------------|-----------|--------------------------|-----------|-----------|
| Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. | Test                    | UOM      | Method      | Limit/Abn | Current                  | History1  | History2  |
|   | Sample Number           |          | Client Info |           | DC0037084<br>24 Jun 2024 |           |           |
|   | Sample Date             | mtho     | Client Info |           | 557                      |           |           |
|   | Machine Age             | mths     | Client Info |           |                          |           |           |
|   | Oil Age                 | mths     | Client Info |           | 1                        |           |           |
|   | Filter Age              | mths     | Client Info |           | 1                        |           |           |
|   | Oil Changed             |          | Client Info |           | Changed                  |           |           |
|   | Filter Changed          |          | Client Info |           | Changed                  |           |           |
|   | Sample Status           |          |             |           | NORMAL                   |           |           |
| WEAR  | Iron                    | ppm      | ASTM D5185m | >50       | 2                        |           |           |
| All component wear rates are normal.  | Chromium                | ppm      | ASTM D5185m |           | 0                        |           |           |
|   | Nickel                  | ppm      | ASTM D5185m |           | 0                        |           |           |
|   | Titanium                | ppm      | ASTM D5185m |           | 0                        |           |           |
|   | Silver                  |          | ASTM D5185m | ~3        | 0                        |           |           |
|   | Aluminum                | ppm      | ASTM D5185m |           | <1                       |           |           |
|   | Lead                    |          | ASTM D5185m |           | 0                        |           |           |
|   | Copper                  | ppm      | ASTM D5185m |           | <1                       |           |           |
|   | Tin                     |          | ASTM D5185m |           | 0                        |           |           |
|   | Vanadium                | ppm      | ASTM D5185m | >4        | 0                        |           |           |
|   | White Metal             | ppm      | *Visual     | NONE      | NONE                     |           |           |
|   | Yellow Metal            | scalar   | *Visual     | NONE      | NONE                     |           |           |
|   | reliow Metal            | scalar   | visuai      | NONE      | NONE                     |           |           |
| CONTAMINATION   | Silicon                 | ppm      | ASTM D5185m | >+100     | 6                        |           |           |
|   | Potassium               | ppm      | ASTM D5185m | >20       | 1                        |           |           |
| There is no indication of any contamination in the oil.   | Water                   |          | WC Method   | >0.1      | NEG                      |           |           |
|   | Soot %                  | %        | *ASTM D7844 |           | 0                        |           |           |
|   | Nitration               | Abs/cm   | *ASTM D7624 | >20       | 6.4                      |           |           |
|   | Sulfation               | Abs/.1mm | *ASTM D7415 | >30       | 16.6                     |           |           |
|   | Silt                    | scalar   | *Visual     | NONE      | NONE                     |           |           |
|   | Debris                  | scalar   | *Visual     | NONE      | NONE                     |           |           |
|   | Sand/Dirt               | scalar   | *Visual     | NONE      | NONE                     |           |           |
|   | Appearance              | scalar   | *Visual     | NORML     | NORML                    |           |           |
|   | Odor                    | scalar   | *Visual     | NORML     | NORML                    |           |           |
|   | <b>Emulsified Water</b> | scalar   | *Visual     | >0.1      | NEG                      |           |           |
|   |                         |          |             |           |                          |           |           |
| FLUID CONDITION   | Sodium                  | ppm      | ASTM D5185m |           | <1                       |           |           |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.   | Boron                   | ppm      | ASTM D5185m |           | 82                       |           |           |
|   | Barium                  | ppm      | ASTM D5185m |           | 0                        |           |           |
|   | Molybdenum              | ppm      | ASTM D5185m |           | 47                       |           |           |
|   | Manganese               | ppm      | ASTM D5185m |           | 0                        |           |           |
|   | Magnesium               | ppm      | ASTM D5185m |           | 611                      |           |           |
|   | Calcium                 | ppm      | ASTM D5185m |           | 1428                     |           |           |
|   | Phosphorus              | ppm      | ASTM D5185m |           | 789                      |           |           |
|   | Zinc                    | ppm      | ASTM D5185m |           | 992                      |           |           |
|   | Sulfur                  | ppm      | ASTM D5185m |           | 3471                     |           |           |
|   | Oxidation               | Abs/.1mm | *ASTM D7414 | >25       | 11.6                     |           |           |
|   | Base Number (BN)        | mg KOH/g | ASTM D2896  |           | 7.6                      |           |           |
|   | Visc @ 100°C            | cSt      | ASTM D445   |           | 9.9                      |           |           |
|   |                         |          |             |           |                          |           |           |





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06234168

: DC0037084 Unique Number : 11123002

Received **Tested** Diagnosed

: 11 Jul 2024 : 12 Jul 2024

: 14 Jul 2024 - Don Baldridge Test Package : MOB 1 ( Additional Tests: TBN )

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To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

**JE RICHARDS** 

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