



# OIL REPORT

LAB NUMBER:  
 REPORT DATE: 1/8/2010  
 CODE:

UNIT ID: 08 CUMMINS  
 CLIENT ID:  
 PAYMENT:

|             |                          |   |
|-------------|--------------------------|---|
| <b>UNIT</b> | MAKE/MODEL: Cummins 6.7L | OIL TYPE & GRADE: Valvoline Premium Blue 15W/40 |
|             | FUEL TYPE: Diesel        | OIL USE INTERVAL: 7,076 Miles                   |
|             | ADDITIONAL INFO: 2008    |   |

|               |  |
|---------------|--|
| <b>CLIENT</b> |  |
|---------------|--|

**COMMENTS** JOHN: The only odd find in the latest sample from your Ram was a sudden jump in potassium. This element can indicate coolant getting into the oil, though we'd typically see higher sodium. Coolant leaks are rare in a new engine, but we'll still watch this next time. In spite of the longer oil run, wear metals are still reading around averages. The engine barely even noticed the increased miles on the oil. We did note a small amount of fuel, and this is likely the reason for the low viscosity. Check back. You could try a longer run next time. We doubt potassium is an issue.

| <b>ELEMENTS IN PARTS PER MILLION</b> | MI/HR on Oil      | 7,076    | <b>UNIT / LOCATION AVERAGES</b> | 4,896      | 2,585    | <b>UNIVERSAL AVERAGES</b> |
|--------------------------------------|-------------------|----------|---------------------------------|------------|----------|---------------------------|
|                                      | MI/HR on Unit     | 14,557   |                                 | 7,481      | 2,585    |                           |
|                                      | Sample Date       | 01/01/10 |                                 | 07/11/09   | 04/25/09 |                           |
|                                      | Make Up Oil Added | 0 qts    |                                 | 0 qts      | 0 qts    |                           |
| ALUMINUM                             | 5                 | 4        | 3                               | 3          | 3        |                           |
| CHROMIUM                             | 2                 | 2        | 1                               | 2          | 1        |                           |
| IRON                                 | 36                | 60       | 38                              | <b>107</b> | 27       |                           |
| COPPER                               | 5                 | 18       | 6                               | <b>44</b>  | 8        |                           |
| LEAD                                 | 1                 | 2        | 2                               | 3          | 1        |                           |
| TIN                                  | 4                 | 3        | 2                               | 3          | 1        |                           |
| MOLYBDENUM                           | 36                | 38       | 40                              | 38         | 38       |                           |
| NICKEL                               | 0                 | 0        | 0                               | 1          | 0        |                           |
| MANGANESE                            | 1                 | 3        | 1                               | 6          | 0        |                           |
| SILVER                               | 1                 | 1        | 1                               | 0          | 0        |                           |
| TITANIUM                             | 0                 | 0        | 0                               | 0          | 0        |                           |
| POTASSIUM                            | <b>21</b>         | 13       | 5                               | 12         | 7        |                           |
| BORON                                | 3                 | 4        | 3                               | 5          | 60       |                           |
| SILICON                              | 7                 | 17       | 9                               | <b>34</b>  | 6        |                           |
| SODIUM                               | 5                 | 9        | 5                               | 16         | 6        |                           |
| CALCIUM                              | 904               | 1005     | 1117                            | 993        | 1504     |                           |
| MAGNESIUM                            | 680               | 791      | 859                             | 833        | 500      |                           |
| PHOSPHORUS                           | 852               | 907      | 1042                            | 827        | 924      |                           |
| ZINC                                 | 1059              | 1181     | 1325                            | 1159       | 1126     |                           |
| BARIUM                               | 0                 | 7        | 2                               | 18         | 0        |                           |

Values Should Be\*

| <b>PROPERTIES</b> | SUS Viscosity @ 210°F | 55.2 | 69-78     | 62.9  | 58.6 |
|-------------------|-----------------------|------|-----------|-------|------|
|                   | cSt Viscosity @ 100°C | 8.82 | 12.7-15.3 | 11.04 | 9.81 |
| Flashpoint in °F  | 385                   | >390 | 390       | 350   |      |
| Fuel %            | 0.5                   | <2.0 | TR        | 6.5   |      |
| Antifreeze %      | ?                     | 0.0  | 0.0       | 0.0   |      |
| Water %           | 0.0                   | <0.1 | 0.0       | 0.0   |      |
| Insolubles %      | 0.3                   | <0.8 | 0.4       | 0.2   |      |
| TBN               |                       |      |           |       |      |
| TAN               |                       |      |           |       |      |
| ISO Code          |                       |      |           |       |      |

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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