

# **OIL ANALYSIS REPORT**

Sample Rating Trend

DIRT

Machine Id

# **Personal Jeep**

Component

**Gasoline Engine** 

**GASOLINE ENGINE OIL SAE 5W20 (--- GAL)** 

## DIAGNOSIS

## Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: 5w-20 )

#### Wear

All component wear rates are normal.

## Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| _)   |                                   |  |   | Sep 2023                        |                            |                  |
|--|-----------------------------------|--|---|---------------------------------|----------------------------|------------------|
| SAMPLE INFOR   | MATION                            | method   | limit/base  | current                         | history1                   | history2         |
| Sample Number  |                                   | Client Info  |   | PCA0098664                      |                            |                  |
| Sample Date  |                                   | Client Info  |   | 29 Sep 2023                     |                            |                  |
| Machine Age  | mls                               | Client Info  |   | 8014                            |                            |                  |
| Oil Age  | mls                               | Client Info  |   | 8014                            |                            |                  |
| Oil Changed  |                                   | Client Info  |   | Changed                         |                            |                  |
| Sample Status  |                                   |  |   | ABNORMAL                        |                            |                  |
| CONTAMINAT   | ION                               | method   | limit/base  | current                         | history1                   | history2         |
| Fuel   |                                   | WC Method  | >4.0  | <1.0                            |                            |                  |
| WEAR METAL   | .S                                | method   | limit/base  | current                         | history1                   | history2         |
| Iron   | ppm                               | ASTM D5185m  | >150  | 64                              |                            |                  |
| Chromium   | ppm                               | ASTM D5185m  | >20   | 2                               |                            |                  |
| Nickel   | ppm                               | ASTM D5185m  | >5  | 1                               |                            |                  |
| Titanium   | ppm                               | ASTM D5185m  |   | <1                              |                            |                  |
| Silver   | ppm                               | ASTM D5185m  | >2  | 0                               |                            |                  |
| Aluminum   | ppm                               | ASTM D5185m  | >40   | 8                               |                            |                  |
| Lead   | ppm                               | ASTM D5185m  | >50   | 2                               |                            |                  |
| Copper   | ppm                               | ASTM D5185m  | >155  | 27                              |                            |                  |
| Tin  | ppm                               | ASTM D5185m  | >10   | 1                               |                            |                  |
| Vanadium   | ppm                               | ASTM D5185m  |   | <1                              |                            |                  |
| Cadmium  | ppm                               | ASTM D5185m  |   | <1                              |                            |                  |
| ADDITIVES  |                                   | method   | limit/base  | current                         | history1                   | history2         |
| Boron  | ppm                               | ASTM D5185m  | 75  | 12                              |                            |                  |
| Barium   | ppm                               | ASTM D5185m  | 5   | 0                               |                            |                  |
| Molybdenum   | ppm                               | ASTM D5185m  | 100   | 148                             |                            |                  |
| Manganese  | ppm                               | ASTM D5185m  |   | 28                              |                            |                  |
| Magnesium  | ppm                               | ASTM D5185m  | 12  | 450                             |                            |                  |
| Calcium  | ppm                               | ASTM D5185m  | 2100  | 1205                            |                            |                  |
| Phosphorus   | ppm                               | ASTM D5185m  | 650   | 610                             |                            |                  |
| Zinc   | ppm                               | ASTM D5185m  | 850   | 744                             |                            |                  |
| Sulfur   |                                   |  |   |                                 |                            |                  |
|  | ppm                               | ASTM D5185m  | 2500  | 1863                            |                            |                  |
| CONTAMINAN   |                                   | ASTM D5185m<br>method  | 2500<br>limit/base                                    | 1863<br>current                 | history1                   | history2         |
| CONTAMINAN<br>Silicon  |                                   |  |   |                                 |                            | history2         |
|  | ITS                               | method   | limit/base  | current                         |                            | ,                |
| Silicon  | ITS<br>ppm                        | method<br>ASTM D5185m  | limit/base >30  | current  4 99                   | history1                   |                  |
| Silicon<br>Sodium  | ppm ppm                           | method ASTM D5185m ASTM D5185m   | limit/base >30 >50                                    | current  99 20                  | history1                   |                  |
| Silicon<br>Sodium<br>Potassium   | ppm ppm                           | method ASTM D5185m ASTM D5185m ASTM D5185m   | limit/base >30 >50                                    | current  ▲ 99 20 15             | history1                   |                  |
| Silicon<br>Sodium<br>Potassium<br>Glycol   | ppm ppm                           | method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982   | limit/base  | current  ▲ 99 20 15 NEG         | history1<br><br><br>       |                  |
| Silicon Sodium Potassium Glycol INFRA-RED  | ppm ppm ppm                       | method  ASTM D5185m  ASTM D5185m  ASTM D5185m  *ASTM D5185m  *ASTM D2982  method                         | limit/base  | current  99 20 15 NEG current   | history1                   | <br><br>history2 |
| Silicon Sodium Potassium Glycol INFRA-RED Soot %                                 | ppm ppm ppm %                     | method  ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982  method  *ASTM D7844                             | limit/base >30 >50 >20  limit/base                    | current  99 20 15 NEG current 0 | history1 history1          | <br><br>history2 |
| Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration                       | ppm ppm ppm %  %  Abs/cm Abs/.1mm | method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415        | limit/base  | current                         | history1 history1          | <br><br>history2 |
| Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation             | ppm ppm ppm %  %  Abs/cm Abs/.1mm | method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415        | limit/base  | current                         | history1 history1          | <br><br>history2 |
| Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRA | ppm ppm % Abs/cm Abs/.1mm         | method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415 method | limit/base >30 >50 >20  limit/base >20 >30 limit/base | current                         | history1 history1 history1 | <br>history2     |



## **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: 05969084 : 10675635

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0098664 Received : 04 Oct 2023 Diagnosed : 06 Oct 2023

: Jonathan Hester Diagnostician

Test Package : MOB 2 ( Additional Tests: Glycol ) 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)

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