

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

### Area **TULSA [21962] 81-56** Component Front Left Final Drive Fluid

CONOCO PHILLIPS 80W90 MP (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: ConocoPhillips 80w/90 gear oil )

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

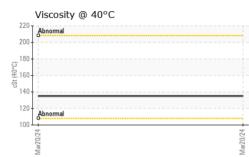
#### Fluid Condition

The condition of the oil is acceptable for the time in service.

| SAMPLE INFORM   | IATION   | method   | limit/base                                   | current                                      | history1 | history2     |
|---|--|--|--|--|----------|--------------|
| Sample Number   |  | Client Info  |  | WC0836216                                    |          |              |
| Sample Date   |  | Client Info  |  | 20 Mar 2024                                  |          |              |
| Machine Age   | hrs  | Client Info  |  | 1458   |          |              |
| Oil Age   | hrs  | Client Info  |  | 1458   |          |              |
| Oil Changed   |  | Client Info  |  | Not Changd                                   |          |              |
| Sample Status   |  |  |  | NORMAL                                       |          |              |
| CONTAMINATION   |  | method   | limit/base                                   | current                                      | history1 | history2     |
| Water   |  | WC Method  | >0.2   | NEG  |          |              |
| WEAR METALS   |  | method   | limit/base                                   | current                                      | history1 | history2     |
| Iron  | ppm  | ASTM D5185m  | >500   | 103  |          |              |
| Chromium  | ppm  | ASTM D5185m  | >10  | 1  |          |              |
| Nickel  | ppm  | ASTM D5185m  | >10  | <1   |          |              |
| Titanium  | ppm  | ASTM D5185m  |  | 1  |          |              |
| Silver  | ppm  | ASTM D5185m  |  | <1   |          |              |
| Aluminum  | ppm  | ASTM D5185m  | >25  | 3  |          |              |
| Lead  | ppm  | ASTM D5185m  | >25  | <1   |          |              |
| Copper  | ppm  | ASTM D5185m  |  | 9  |          |              |
| Tin   | ppm  | ASTM D5185m  | >10  | ر<br><1                                      |          |              |
| Vanadium  | ppm  | ASTM D5185m  | 210  | <1   |          |              |
| Cadmium   | ppm  | ASTM D5185m  |  | <1   |          |              |
| ADDITIVES   |  | method   | limit/base                                   | current                                      | history1 | history2     |
| Boron   | ppm  | ASTM D5185m  |  | 230  |          |              |
| Barium  | ppm  | ASTM D5185m  |  | 0  |          |              |
| Molybdenum  | ppm  | ASTM D5185m  |  | <1   |          |              |
| Manganese   | ppm  | ASTM D5185m  |  | 2  |          |              |
| Magnesium   | ppm  | ASTM D5185m  |  | 2  |          |              |
| Calcium   | ppm  | ASTM D5185m  |  | 43   |          |              |
| Phosphorus  | ppm  | ASTM D5185m  |  | 1075   |          |              |
| Zinc  | ppm  | ASTM D5185m  |  | 46   |          |              |
| Sulfur  |  | ASTM D5185m  |  | 18729  |          |              |
|   | ppm  |  |  | 10/29  |          |              |
| CONTAMINANTS  |  | method   | limit/base                                   | current                                      | history1 | history2     |
| Silicon   | ppm  | ASTM D5185m  |  | 19   |          |              |
| Sodium  | ppm  | ASTM D5185m  |  | 10   |          |              |
| Potassium   | ppm  | ASTM D5185m  | >20  | 2  |          |              |
| VISUAL  |  | method   |  |  |          |              |
|   |  | methou   | limit/base                                   | current                                      | history1 | history2     |
| White Metal   | scalar   | *Visual  | NONE   | NONE   | history1 |              |
| Yellow Metal  | scalar   | *Visual<br>*Visual   | NONE<br>NONE                                 | NONE<br>NONE                                 |          |              |
| Yellow Metal<br>Precipitate   |  | *Visual<br>*Visual<br>*Visual                                  | NONE<br>NONE<br>NONE                         | NONE<br>NONE<br>NONE                         |          |              |
| Yellow Metal<br>Precipitate   | scalar   | *Visual<br>*Visual   | NONE<br>NONE                                 | NONE<br>NONE                                 |          |              |
| Yellow Metal<br>Precipitate<br>Silt   | scalar<br>scalar   | *Visual<br>*Visual<br>*Visual                                  | NONE<br>NONE<br>NONE                         | NONE<br>NONE<br>NONE                         |          |              |
| Yellow Metal<br>Precipitate<br>Silt<br>Debris   | scalar<br>scalar<br>scalar                               | *Visual<br>*Visual<br>*Visual<br>*Visual                       | NONE<br>NONE<br>NONE<br>NONE                 | NONE<br>NONE<br>NONE<br>NONE                 |          |              |
| White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance | scalar<br>scalar<br>scalar<br>scalar                     | *Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual            | NONE<br>NONE<br>NONE<br>NONE                 | NONE<br>NONE<br>NONE<br>NONE<br>NONE         |          |              |
| Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt                              | scalar<br>scalar<br>scalar<br>scalar<br>scalar           | *Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual            | NONE<br>NONE<br>NONE<br>NONE<br>NONE         | NONE<br>NONE<br>NONE<br>NONE<br>NONE         | <br><br> | <br><br>     |
| Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance                | scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar | *Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual | NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NORE | NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE | <br><br> | <br><br><br> |



# **OIL ANALYSIS REPORT**



|   | FLUID PROPER     | TIES m  | ethod            | limit/base  | current  | history1 | history2   |
|---|------------------|---|------------------|---|----------|----------|--|
|   | Visc @ 40°C      | cSt AS  | TM D445          |   | 135      |          |  |
|   | SAMPLE IMAGE     | :S m  | ethod            | limit/base  | current  | history1 | history2   |
| 24  | Color            |   |                  |   | no image | no image | no image   |
| Mar20/24  | Bottom           |   |                  |   | no image | no image | no image   |
|   | GRAPHS           |   |                  |   |          |          |  |
|   | Ferrous Alloys   |   |                  |   |          |          |  |
|   | Viscosity @ 40°C |   |                  | Mar20/24  |          |          |  |
| Laboratory<br>Sample No.<br>Lab Number<br>Unique Number<br>Test Package |                  | 01 Madison Av<br>Received<br>Tested<br>Diagnose | : 25 .<br>: 26 . | NC 27513<br>Jun 2024<br>Jun 2024<br>Jun 2024 - Se |          |          | AND BRIDGE<br>122ND E AVE<br>TULSA, OK<br>US 74146<br>S STEELMON |



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: MANTUL [WUSCAR] 06220075 (Generated: 06/28/2024 02:44:48) Rev: 1

Test Package : CONST

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.

Certificate L2367

Submitted By: JAMES STEELMON Page 2 of 2

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