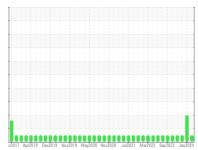


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



2669C PETERBILT 567

Component

Natural Gas Engine

CHEVRON DELO 400 NG (48 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

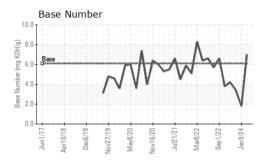
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

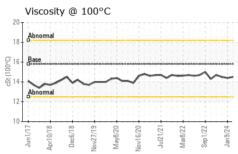
| n2017 Apr2018 Doc2010 Nov2019 May2020 Nov2020 Jul2021 Max2022 Sap2022 Jun2024 | | | | | | |
|---|--|--|--|---|--|--|
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | GFL0094743 | GFL0103225 | GFL0089325 |
| Sample Date | | Client Info | | 05 Feb 2024 | 09 Jan 2024 | 08 Aug 2023 |
| Machine Age | hrs | Client Info | | 18430 | 18202 | 16977 |
| Oil Age | hrs | Client Info | | 228 | 1225 | 1185 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >50 | 3 | 13 | 5 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 2 | 4 | 3 |
| Lead | ppm | ASTM D5185m | >30 | 5 | <u>4</u> 6 | 6 |
| Copper | ppm | ASTM D5185m | >35 | 2 | 7 | <1 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| 4.5.5.150.450 | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | method ASTM D5185m | limit/base | current 29 | history1 9 | history2 7 |
| | ppm | | limit/base | | | • |
| Boron | | ASTM D5185m | limit/base | 29 | 9 | 7 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | limit/base | 29 0 | 9 | 7 |
| Boron Barium Molybdenum | ppm | ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 29 0 48 | 9 0 50 | 7 0 50 |
| Boron Barium Molybdenum Manganese | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 29 0 48 <1 | 9 0 50 | 7 0 50 <1 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 29 0 48 <1 577 | 9 0 50 0 605 | 7 0 50 <1 567 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 29 0 48 <1 577 1445 | 9 0 50 0 605 1684 | 7 0 50 <1 567 1692 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 800 | 29 0 48 <1 577 1445 774 | 9 0 50 0 605 1684 787 | 7 0 50 <1 567 1692 685 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 800 | 29 0 48 <1 577 1445 774 | 9 0 50 0 605 1684 787 1055 | 7 0 50 <1 567 1692 685 967 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 800 880 | 29 0 48 <1 577 1445 774 936 2328 | 9 0 50 0 605 1684 787 1055 2252 | 7 0 50 <1 567 1692 685 967 2713 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 800 880 limit/base | 29 0 48 <1 577 1445 774 936 2328 current | 9 0 50 0 605 1684 787 1055 2252 history1 | 7 0 50 <1 567 1692 685 967 2713 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 800 880 limit/base >+100 | 29 0 48 <1 577 1445 774 936 2328 current | 9 0 50 0 605 1684 787 1055 2252 history1 | 7 0 50 <1 567 1692 685 967 2713 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 800 880 limit/base >+100 | 29 0 48 <1 577 1445 774 936 2328 current 4 | 9 0 50 0 605 1684 787 1055 2252 history1 5 | 7 0 50 <1 567 1692 685 967 2713 history2 5 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 800 880 limit/base >+100 >20 | 29 0 48 <1 577 1445 774 936 2328 current 4 5 | 9 0 50 0 605 1684 787 1055 2252 history1 5 11 <1 | 7 0 50 <1 567 1692 685 967 2713 history2 5 7 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 800 880 limit/base >+100 >20 limit/base | 29 0 48 <1 577 1445 774 936 2328 current 4 5 0 | 9 0 50 0 605 1684 787 1055 2252 history1 5 11 <1 | 7 0 50 <1 567 1692 685 967 2713 history2 5 7 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 800 880 limit/base >+100 >20 limit/base | 29 0 48 <1 577 1445 774 936 2328 current 4 5 0 | 9 0 50 0 605 1684 787 1055 2252 history1 5 11 <1 | 7 0 50 <1 567 1692 685 967 2713 history2 5 7 <1 history2 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm | ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145 | 800 880 limit/base >+100 >20 limit/base | 29 0 48 <1 577 1445 774 936 2328 current 4 5 0 current 0 8.3 | 9 0 50 0 605 1684 787 1055 2252 history1 5 11 <1 history1 0 12.5 | 7 0 50 <1 567 1692 685 967 2713 history2 5 7 <1 history2 0 10.7 |

Base Number (BN) mg KOH/g ASTM D2896 6.1 7.0



OIL ANALYSIS REPORT

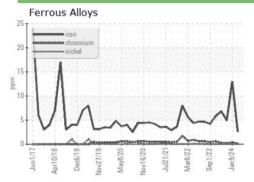


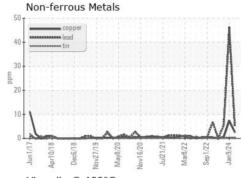


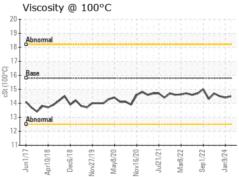
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

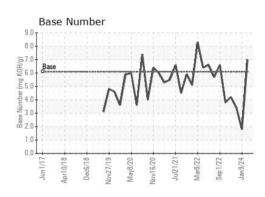
| FLUID PROPI | ERTIES | method | | | | history2 |
|--------------|--------|-----------|------|------|------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.8 | 14.5 | 14.4 | 14.5 |

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number : 06082295 Unique Number : 10869740

Test Package : FLEET

: GFL0094743

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

Tested Diagnosed

: 08 Feb 2024 : 08 Feb 2024 - Wes Davis

: 07 Feb 2024

GFL Environmental - 001 - Raleigh(CNG)

3741 Conquest Drive Garner, NC US 27529

F: (919)662-7130

Contact: Craig Johnson craig.johnson@gflenv.com T: (919)662-7100

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)