

OIL ANALYSIS REPORT

Ewing Hauling PETERBILT 2595

Component Diesel Engine

GIBRALTAR 15W/40 SUPER S-3 LX (11)

Recommendation

Resample at the next service interval to monitor.

Wear

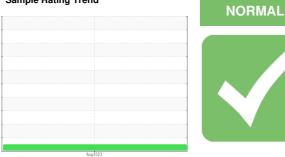
All component wear rates are normal.

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.



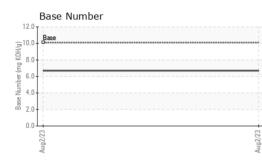
Sample Rating Trend

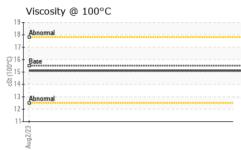


| SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
|---|---|--|---|--|--|--|
| Sample Number | | Client Info | | WC0830844 | | |
| Sample Date | | Client Info | | 02 Aug 2023 | | |
| Machine Age | hrs | Client Info | | 14169 | | |
| Oil Age | hrs | Client Info | | 450 | | |
| Oil Changed | | Client Info | | Changed | | |
| Sample Status | | | | NORMAL | | |
| CONTAMINATIO | N | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | | |
| Glycol | | WC Method | 20 | NEG | | |
| | _ | | | | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >110 | 8 | | |
| Chromium | ppm | ASTM D5185m | >4 | <1 | | |
| Nickel | ppm | ASTM D5185m | >2 | 0 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | >2 | <1 | | |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | | |
| Lead | ppm | ASTM D5185m | >45 | 7 | | |
| Copper | ppm | ASTM D5185m | >85 | 2 | | |
| Tin | ppm | ASTM D5185m | >4 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | 0 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| | 1. | | | • | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | | limit/base | | history1 | history2 |
| | | method | limit/base | current | | |
| Boron | ppm | method ASTM D5185m | limit/base | current 8 | | |
| Boron Barium | ppm ppm | method ASTM D5185m ASTM D5185m | | current 8 2 | | |
| Boron Barium Molybdenum | ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m | | current 8 2 74 | | |
| Boron Barium Molybdenum Manganese | ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 | current 8 2 74 0 | | |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 | current 8 2 74 0 935 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 | Current 8 2 74 0 935 1410 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 1150 | current 8 2 74 0 935 1410 1121 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base | current 8 2 74 0 935 1410 1121 1350 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base | Current 8 2 74 0 935 1410 1121 1350 3564 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base | current 8 2 74 0 935 1410 1121 1350 3564 current | | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 >20 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 4 0 4 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 >20 limit/base >3 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 >20 limit/base >3 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 4 0 4. 0.3 | history1 history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 limit/base >30 s20 limit/base >3 s20 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 4 0 4 0 4 0 3564 | history1 history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 660 1000 1050 1150 1270 20 30 20 20 33 20 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 33 20 20 20 20 20 20 20 20 20 20 20 20 20 | current 8 2 74 0 935 1410 1121 1350 3564 current 4 0 4 0.3 10.3 22.2 | history1 history1 history1 | history2 history2 history2 |



OIL ANALYSIS REPORT





| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|-----------|----------------------------------|-------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | | |
| Yellow Metal | scalar | *Visual | NONE | NONE | | |
| Precipitate | scalar | *Visual | NONE | NONE | | |
| 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 | | |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | | |
| Free Water | scalar | *Visual | | NEG | | |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.5 | 15.1 | | |
| GRAPHS | | | | | | |
| Ferrous Alloys | | | | | | |
| 10 iron | | | | | | |
| 8 - chromium | | | _ | | | |
| | | | | | | |
| 6- | | | | | | |
| 4 | | | | | | |
| | | | | | | |
| 2- | | | | | | |
| | | | | | | |
| Aug2/23 | | | Aug2/23 | | | |
| | | | Aı | | | |
| Non-ferrous Metal | S | | | | | |
| copper | | | | | | |
| 8 - management lead | | | | | | |
| 6 - | | | | | | |
| | | | | | | |
| 4 | | | | | | |
| 2 | | | | | | |
| | | | | | | |
| 0 | | | 53 | | | |
| Aug2/23 | | | Aug2/23 | | | |
| Viscosity @ 100°C | | | | Data Numl | _ | |
| ¹⁹ T | | | 12.0 | Base Number | | |
| 18 Abnormal | | | 10.0 | Base | | |
| 17 | | | (B/H | | | |
| 516 Base 15 - | | | 8.0 6.0 Base Number 4.0 | | | |
| 15- | | | <u>ل</u> به 6.0 | | | |
| | | | un 4.0 | 1 | | |
| 13 Abnormal | | | ase as a second | | | |

0.0

Aug2/23

Aug2/23 -

: 14 Aug 2023

: 15 Aug 2023



Unique Number : 10603149 Diagnostician : Don Baldridge Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. CEvans@interstatewaste.com * - 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)

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

Received

Diagnosed

12 11

Laboratory

Sample No.

Lab Number

Aug2/23 -

: WC0830844

: 05923202

INTERSTATE WASTE-EWING

432 STOKES AVENUE

EWING TOWNSHIP, NJ

Contact: Carlos Evans

Jg2/23

US 08638

Т:

F: