



# OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Area  
**Stoneway Concrete Renton**  
 Machine Id  
**[Stoneway Concrete Renton] 10-526**  
 Component  
**Diesel Engine**  
 Fluid  
**CASTROL Vecton LD 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>PE0002054</b>   | PE0002065   | PE0001305   |
| Sample Date    |     | Client Info |           | <b>17 Jun 2024</b> | 22 Dec 2023 | 04 May 2023 |
| Machine Age    | hrs | Client Info |           | <b>9491</b>        | 8840        | 7630        |
| Oil Age        | hrs | Client Info |           | <b>644</b>         | 1217        | 1237        |
| Filter Age     | hrs | Client Info |           | <b>644</b>         | 1217        | 1237        |
| Oil Changed    |     | Client Info |           | <b>Filtered</b>    | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |             |      |      |
|--------------|--------|-------------|------|-------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>4</b>    | 11   | 12   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>0</b>    | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>    | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>    | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>    | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>    | 2    | <1   |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>    | <1   | <1   |
| Copper       | ppm    | ASTM D5185m | >330 | <b>4</b>    | 25   | 93   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>    | <1   | 1    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>    | <1   | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b> | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b> | NONE | NONE |

## CONTAMINATION

There is no indication of any contamination in the oil.

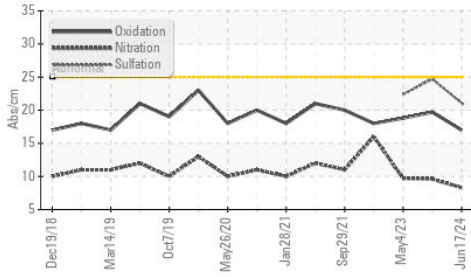
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>2</b>       | 4     | 4     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>7</b>       | 3     | 5     |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.2</b>     | 0.5   | 0.5   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>8.3</b>     | 9.6   | 9.7   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>21.1</b>    | 24.7  | 22.4  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

## 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.

|                  |          |             |     |              |      |      |
|------------------|----------|-------------|-----|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |     | <b>2</b>     | 3    | 6    |
| Boron            | ppm      | ASTM D5185m |     | <b>99</b>    | 44   | 28   |
| Barium           | ppm      | ASTM D5185m |     | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>&lt;1</b> | 7    | 56   |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |     | <b>25</b>    | 92   | 894  |
| Calcium          | ppm      | ASTM D5185m |     | <b>2257</b>  | 2021 | 1178 |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>1002</b>  | 1021 | 1009 |
| Zinc             | ppm      | ASTM D5185m |     | <b>1204</b>  | 1208 | 1277 |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3965</b>  | 3133 | 3604 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>17.0</b>  | 19.7 | 18.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>6.2</b>   | 5.2  | 6.8  |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>11.6</b>  | 11.9 | 11.6 |

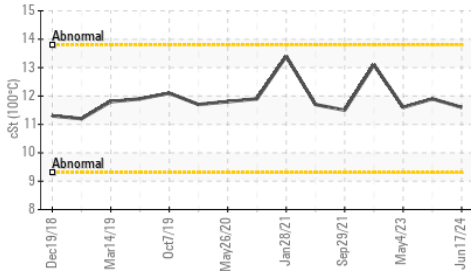
**FT-IR (Direct Trend)**



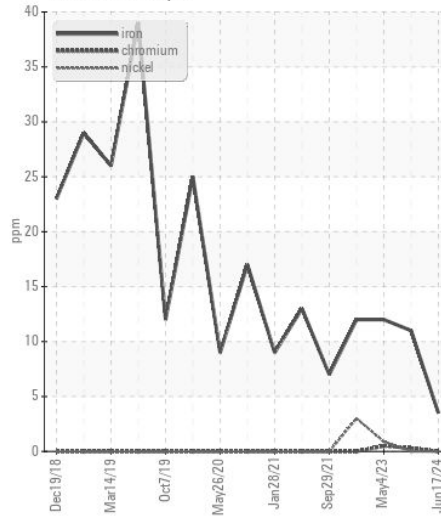
**Base Number**



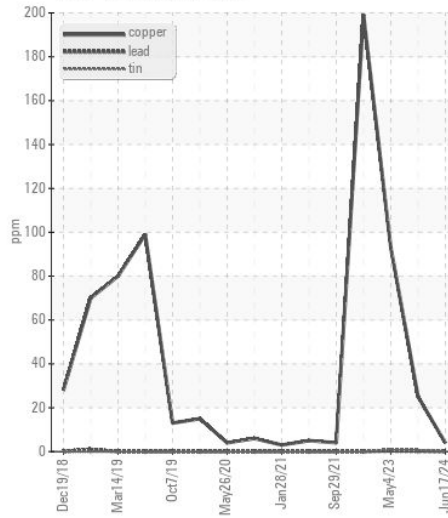
**Viscosity @ 100°C**



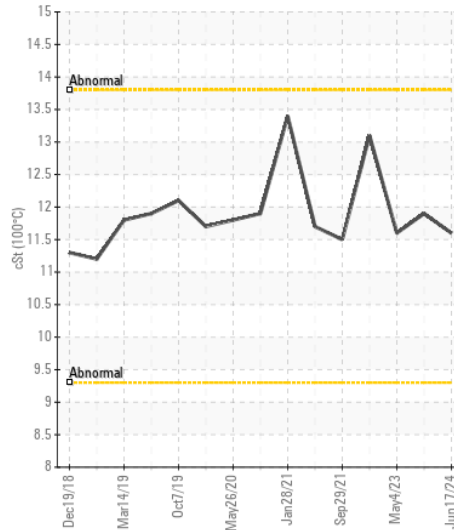
**Ferrous Alloys**



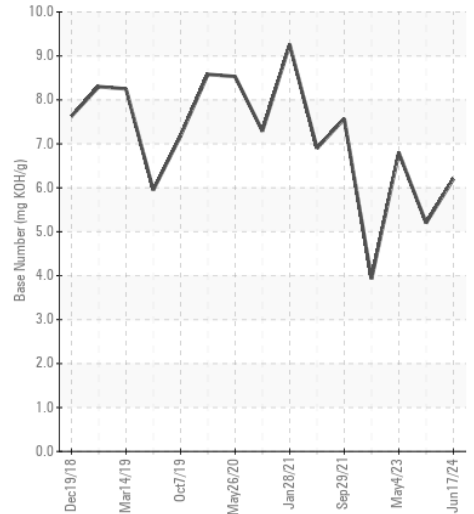
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0002054  
**Lab Number** : 06220489  
**Unique Number** : 11098686  
**Test Package** : CONST ( Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN )

**Gary Merlino Construction - Off Road Shop**  
 9125 10TH AVE SOUTH  
 SEATTLE, WA  
 US 98108  
 Contact: Tony Wytko  
 oilsamples@gmccinc.com

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)

T:  
F: