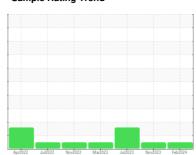


## **OIL ANALYSIS REPORT**

### Sample Rating Trend



## NORMAL



# MIXERS Machine Id [MIXERS] M296

Diesel Engine

**KENDALL 15W40 (--- GAL)** 

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Moor

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil

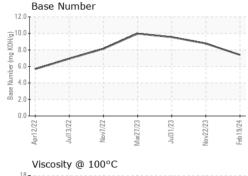
### **Fluid Condition**

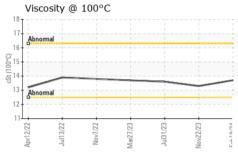
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          | Apr2022     | Jul2022 Nov2022 | Mar2023 Jul2023 Nov2023 | Feb2024     |             |
|------------------|----------|-------------|-----------------|-------------------------|-------------|-------------|
| SAMPLE INFORT    | MATION   | method      | limit/base      | current                 | history1    | history2    |
| Sample Number    |          | Client Info |                 | PCA0109791              | LP0001120   | LP0000107   |
| Sample Date      |          | Client Info |                 | 19 Feb 2024             | 22 Nov 2023 | 31 Jul 2023 |
| Machine Age      | hrs      | Client Info |                 | 23972                   | 23755       | 22618       |
| Oil Age          | hrs      | Client Info |                 | 600                     | 600         | 600         |
| Oil Changed      |          | Client Info |                 | Changed                 | Changed     | Changed     |
| Sample Status    |          |             |                 | NORMAL                  | NORMAL      | ABNORMAL    |
| CONTAMINAT       | ION      | method      | limit/base      | current                 | history1    | history2    |
| Fuel             |          | WC Method   | >5              | <1.0                    | <1.0        | <1.0        |
| Water            |          | WC Method   | >0.2            | NEG                     | NEG         | NEG         |
| Glycol           |          | WC Method   |                 | NEG                     | NEG         | NEG         |
| WEAR METAL       | S        | method      | limit/base      | current                 | history1    | history2    |
| Iron             | ppm      | ASTM D5185m | >100            | 8                       | 26          | 21          |
| Chromium         | ppm      | ASTM D5185m | >20             | <1                      | <1          | <1          |
| Nickel           | ppm      | ASTM D5185m | >4              | 0                       | <1          | 0           |
| Titanium         | ppm      | ASTM D5185m |                 | <1                      | 1           | 2           |
| Silver           | ppm      | ASTM D5185m | >3              | 0                       | 0           | 0           |
| Aluminum         | ppm      | ASTM D5185m | >20             | 2                       | 2           | 2           |
| Lead             | ppm      | ASTM D5185m | >40             | <1                      | 1           | 1           |
| Copper           | ppm      | ASTM D5185m | >330            | 3                       | 11          | 7           |
| Tin              | ppm      | ASTM D5185m | >15             | <1                      | <1          | <1          |
| Vanadium         | ppm      | ASTM D5185m |                 | 0                       | 0           | <1          |
| Cadmium          | ppm      | ASTM D5185m |                 | 0                       | <1          | 0           |
| ADDITIVES        |          | method      | limit/base      | current                 | history1    | history2    |
| Boron            | ppm      | ASTM D5185m | 6.3             | 50                      | 32          | 32          |
| Barium           | ppm      | ASTM D5185m | 0.6             | 0                       | 0           | 0           |
| Molybdenum       | ppm      | ASTM D5185m | 0.4             | 79                      | 81          | 83          |
| Manganese        | ppm      | ASTM D5185m |                 | <1                      | <1          | <1          |
| Magnesium        | ppm      | ASTM D5185m | 277             | 115                     | 131         | 202         |
| Calcium          | ppm      | ASTM D5185m | 1514            | 1992                    | 2006        | 2059        |
| Phosphorus       | ppm      | ASTM D5185m | 634             | 1029                    | 845         | 1021        |
| Zinc             | ppm      | ASTM D5185m | 743             | 1195                    | 1164        | 1260        |
| Sulfur           | ppm      | ASTM D5185m | 2592            | 3633                    | 4154        | 4186        |
| CONTAMINAN       | TS       | method      | limit/base      | current                 | history1    | history2    |
| Silicon          | ppm      | ASTM D5185m | >25             | 8                       | 19          | <b>△</b> 37 |
| Sodium           | ppm      | ASTM D5185m |                 | 2                       | 6           | 13          |
| Potassium        | ppm      | ASTM D5185m | >20             | 2                       | 3           | 3           |
| INFRA-RED        |          | method      | limit/base      | current                 | history1    | history2    |
| Soot %           | %        | *ASTM D7844 | >3              | 0.3                     | 0.5         | 0.5         |
| Nitration        | Abs/cm   | *ASTM D7624 | >20             | 9.3                     | 10.1        | 9.7         |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30             | 18.9                    | 20.9        | 20.0        |
| FLUID DEGRA      | OATION   | method      | limit/base      | current                 | history1    | history2    |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25             | 15.2                    | 17.8        | 16.3        |
| Base Number (BN) | mg KOH/g | ASTM D2896  |                 | 7.4                     | 8.77        | 9.55        |
|                  | , ,      |             |                 |                         |             |             |



## **OIL ANALYSIS REPORT**

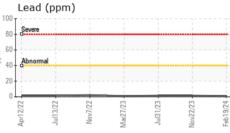


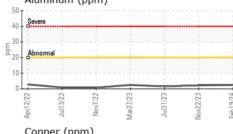


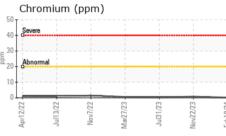
| VISUAL                  |        | method  | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal             | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal            | 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    |
| <b>Emulsified Water</b> | scalar | *Visual | >0.2       | NEG     | NEG      | NEG      |
| Free Water              | scalar | *Visual |            | NEG     | NEG      | NEG      |
|                         |        |         |            |         |          |          |

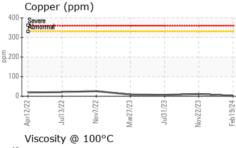
| FLUID FROF   | ENTIES | memou     |      | HISTOLAL | HISTOLYZ |
|--------------|--------|-----------|------|----------|----------|
| Visc @ 100°C | cSt    | ASTM D445 | 13.7 | 13.3     | 13.6     |

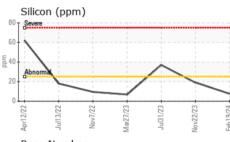
| Severe   |      |         |          |          |               |          |
|----------|------|---------|----------|----------|---------------|----------|
|          |      |         | -        | -        |               |          |
| Abno     | rmal |         |          |          |               |          |
| 50       |      |         |          |          |               |          |
| ا        |      |         | _        |          | $\Rightarrow$ |          |
| Apr12/22 | 3/22 | Nov7/22 | Mar27/23 | Jul31/23 | Nov22/23      | Feb19/24 |
|          | Ξ    | 8       | 11.7     | =        | 72            |          |

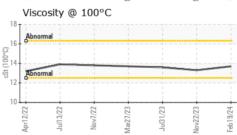


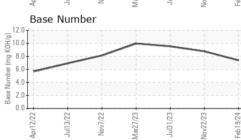














Certificate L2367

Laboratory Sample No.

Test Package : MOB 2

: PCA0109791 Lab Number : 06105099 Unique Number: 10903329

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

: 29 Feb 2024 : 01 Mar 2024 Diagnosed

: 01 Mar 2024 - Wes Davis

WILBRAHAM, MA US 01095 Contact: Michael Dupuis mdupuis@cs-ma.us

2420 BOSTON RD

T: (413)733-6331

**CONSTRUCTION SERVICES** 

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)

F: