

## **OIL ANALYSIS REPORT**

## OKLAHOMA/102/EG - DOZER

Sample Rating Trend



NORMAL

Resample at the next service interval to monitor.

There is no indication of any contamination in the

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

All component wear rates are normal.

oil is suitable for further service.

DIAGNOSIS Recommendation

Contamination

Fluid Condition

Wear

oil.

## Componen **Diesel Engine**

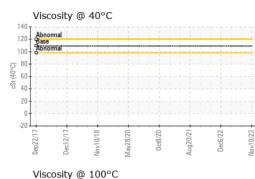
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

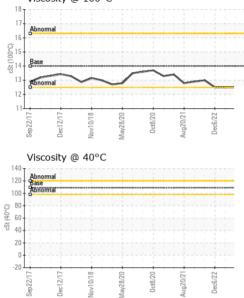
39.61 [OKLAHOMA^102^EG - DOZER]

|                  |          | ep2017 Dec  | 2017 Nov2018 May203 | -           |             |             |
|------------------|----------|-------------|---------------------|-------------|-------------|-------------|
| SAMPLE INFORM    | ΛΑΠΟΝ    | method      | limit/base          | current     | history1    | history2    |
| Sample Number    |          | Client Info |                     | WC0873886   | WC0807994   | WC0758726   |
| Sample Date      |          | Client Info |                     | 10 Nov 2023 | 01 May 2023 | 10 Feb 2023 |
| Machine Age      | hrs      | Client Info |                     | 9660        | 9390        | 9047        |
| Oil Age          | hrs      | Client Info |                     | 270         | 343         | 341         |
| Oil Changed      |          | Client Info |                     | Changed     | Changed     | Changed     |
| Sample Status    |          |             |                     | NORMAL      | NORMAL      | NORMAL      |
| CONTAMINATION    | N        | 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 METALS      |          | method      | limit/base          | current     | history1    | history2    |
| Iron             | ppm      | ASTM D5185m | >100                | 30          | 37          | 40          |
| Chromium         | ppm      | ASTM D5185m | >20                 | <1          | 1           | 1           |
| Nickel           | ppm      | ASTM D5185m | >2                  | 0           | <1          | 0           |
| Titanium         | ppm      | ASTM D5185m | >2                  | <1          | <1          | 0           |
| Silver           | ppm      | ASTM D5185m | >2                  | 0           | 0           | 0           |
| Aluminum         | ppm      | ASTM D5185m | >25                 | 1           | 2           | <1          |
| Lead             | ppm      | ASTM D5185m | >40                 | 2           | 4           | 3           |
| Copper           | ppm      | ASTM D5185m | >330                | 3           | 4           | 3           |
| Tin              | ppm      | ASTM D5185m | >15                 | <1          | <1          | <1          |
| Vanadium         | ppm      | ASTM D5185m |                     | 0           | 0           | 0           |
| Cadmium          | ppm      | ASTM D5185m |                     | 0           | 0           | 0           |
| ADDITIVES        |          | method      | limit/base          | current     | history1    | history2    |
| Boron            | ppm      | ASTM D5185m | 0                   | 45          | 43          | 44          |
| Barium           | ppm      | ASTM D5185m | 0                   | 0           | 2           | 0           |
| Molybdenum       | ppm      | ASTM D5185m | 0                   | 42          | 43          | 42          |
| Manganese        | ppm      | ASTM D5185m |                     | <1          | <1          | <1          |
| Magnesium        | ppm      | ASTM D5185m | 0                   | 490         | 485         | 504         |
| Calcium          | ppm      | ASTM D5185m |                     | 1686        | 1723        | 1813        |
| Phosphorus       | ppm      | ASTM D5185m |                     | 729         | 744         | 774         |
| Zinc             | ppm      | ASTM D5185m |                     | 911         | 911         | 976         |
| Sulfur           | ppm      | ASTM D5185m |                     | 2522        | 2473        | 2657        |
| CONTAMINANTS     |          | method      | limit/base          | current     | history1    | history2    |
| Silicon          | ppm      | ASTM D5185m | >25                 | 5           | 6           | 5           |
| Sodium           | ppm      | ASTM D5185m |                     | 0           | 1           | <1          |
| Potassium        | ppm      | ASTM D5185m | >20                 | 2           | <1          | 1           |
| INFRA-RED        |          | method      | limit/base          | current     | history1    | history2    |
| Soot %           | %        | *ASTM D7844 | >3                  | 0.5         | 0.6         | 0.6         |
| Nitration        | Abs/cm   | *ASTM D7624 | >20                 | 9.1         | 10.2        | 10.2        |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30                 | 23.5        | 24.5        | 24.0        |
| FLUID DEGRADA    | TION     | method      | limit/base          | current     | history1    | history2    |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25                 | 21.6        | 23.1        | 22.4        |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.4                 | 8.9         | 9.4         | 8.7         |
|                  |          |             |                     |             |             |             |

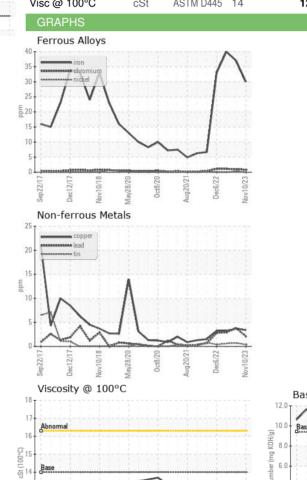


## **OIL ANALYSIS REPORT**





| 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   | >0.2       | NEG     | NEG      | NEG      |
| Free Water       | scalar | *Visual   |            | NEG     | NEG      | NEG      |
| FLUID PROPER     | TIES   | method    | limit/base | current | history1 | history2 |
| Visc @ 100°C     | cSt    | ASTM D445 | 14         | 12.4    | 12.5     | 12.5     |
| GRAPHS           |        |           |            |         |          |          |



Dec6/22 -

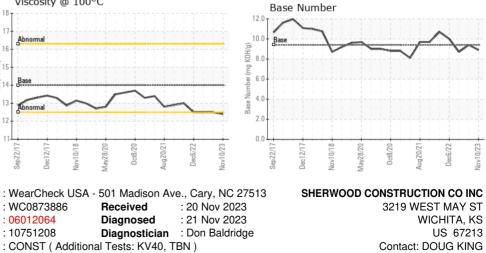
0ct8/20

Received

Diagnosed

May28/20

Aug20/21





Unique Number Test Package : CONST (Additional Tests: KV40, TBN) Certificate L2367 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)

Nov10/18

Laboratory

Sample No.

Lab Number

12

Sep22/17

Dec12/17

: WC0873886

:06012064

: 10751208

doug.king@sherwood.net

T: (316)617-3161

Page 2 of 2

F: x: