



## AUTO WORLD 354004 MAN 66029118012920 - STARBOARD DIESEL ENGINE

Sample No: VPA052262

Oil Type: CHEVRON DELO 400 SYNTHETIC 5W40

|                           |             |              | <br> |  |
|---------------------------|-------------|--------------|------|--|
| SAMPLE INFORMAT           | <b>TION</b> |              |      |  |
|                           |             | VPA052262    |      |  |
| Sample Number Sample Date |             | 30 Jan 2024  | <br> |  |
| Machine Hours             |             | 776          | <br> |  |
| Oil Hours                 |             | 64           | <br> |  |
| Oil Changed               |             | Changed      | <br> |  |
| Sample Status             |             | NORMAL       | <br> |  |
|                           |             | NORIVIAL     | <br> |  |
| OIL CONDITION             |             |              |      |  |
| Visc @ 100°C              | cSt         | <b>■13.4</b> | <br> |  |
| Base Number (BN)          | mg KOH/g    | <b>6.2</b>   | <br> |  |
| Oxidation (PA)            | %           | 172          | <br> |  |
| CONTAMINATION             |             |              |      |  |
| Water                     | %           | NEG          | <br> |  |
| Soot %                    | %           | NEG<br>■ 0.2 | <br> |  |
| Nitration (PA)            | %           | 61           | <br> |  |
| Sulfation (PA)            | %           | 102          | <br> |  |
| Glycol                    | %           | NEG          | <br> |  |
| Fuel                      | %           | <1.0         | <br> |  |
| Silicon                   | ppm         | <b>■</b> 5   | <br> |  |
| Sodium                    | ppm         | <b>■</b> <1  | <br> |  |
| Potassium                 | ppm         | <b>4</b>     | <br> |  |
| WEAD METALS               |             | _            |      |  |
| WEAR METALS               |             |              |      |  |
| Iron                      | ppm         | <b>15</b>    | <br> |  |
| Copper                    | ppm         | <b>16</b>    | <br> |  |
| Lead                      | ppm         | <b>1</b>     | <br> |  |
| Tin                       | ppm         | <b>■</b> <1  | <br> |  |
| Aluminum                  | ppm         | <b>2</b>     | <br> |  |
| Chromium                  | ppm         | <b>■</b> <1  | <br> |  |
| Molybdenum                | ppm         | <b>44</b>    | <br> |  |
| Nickel                    | ppm         | <b>■</b> <1  | <br> |  |
| Titanium                  | ppm         | □0           | <br> |  |
| Silver                    | ppm         | <b>■</b> 0   | <br> |  |
| Manganese                 | ppm         | <b></b>      | <br> |  |
| Vanadium                  | ppm         | 0            | <br> |  |
| ZAVITIDDA                 |             |              |      |  |
| Calcium                   | ppm         | <b>■</b> 958 | <br> |  |
| Magnesium                 | ppm         | <b>942</b>   | <br> |  |
| Zinc                      | ppm         | <b>1311</b>  | <br> |  |
| Phosphorus                | ppm         | ■1088        | <br> |  |
| Barium                    | ppm         | <b>0</b>     | <br> |  |
| Boron                     | ppm         | <b>109</b>   | <br> |  |
|                           |             |              |      |  |

## Skipper Marine of Ohio, LLC

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## Diagnosis

F:

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Depot:VP494046Unique No:10860012Signed:Don BaldridgeReport Date:05 Feb 2024

Contact/Location: D LAKE - VP494046

## OIL ANALYSIS REPORT



