

OIL ANALYSIS REPORT

## Machine Id INTERNATIONAL 620 620 Component Diesel Engine Fluid TRC PRO-SPEC IV SYNTHETIC BLEND 15W40 (11 GAL)

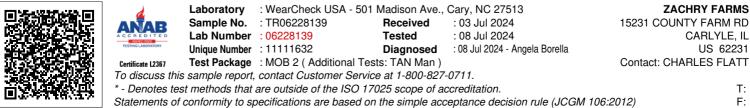
| RECOMMENDATION  | Test             | UOM      | Method      | Limit/Abn | Current     | History1 | History2 |
|---|------------------|----------|-------------|-----------|-------------|----------|----------|
| Oil and filter change at the time of sampling has been noted. Resample<br>at the next service interval to monitor.                              | Sample Number    |          | Client Info |           | TR06228139  |          |          |
|   | Sample Date      |          | Client Info |           | 09 Jan 2024 |          |          |
|   | Machine Age      | hrs      | Client Info |           | 652         |          |          |
|   | Oil Age          | hrs      | Client Info |           | 300         |          |          |
|   | Filter Age       | hrs      | Client Info |           | 300         |          |          |
|   | Oil Changed      |          | Client Info |           | Changed     |          |          |
|   | Filter Changed   |          | Client Info |           | Changed     |          |          |
|   | Sample Status    |          |             |           | NORMAL      |          |          |
|   |                  |          |             |           |             |          |          |
| WEAR<br>All component wear rates are normal.  | Iron             | ppm      | ASTM D5185m |           | 12          |          |          |
|   | Chromium         | ppm      | ASTM D5185m |           | 1           |          |          |
|   | Nickel           | ppm      | ASTM D5185m | >4        | <1          |          |          |
|   | Titanium         | ppm      | ASTM D5185m |           | <1          |          |          |
|   | Silver           | ppm      | ASTM D5185m |           | 6           |          |          |
|   | Aluminum         | ppm      | ASTM D5185m |           | 3           |          |          |
|   | Lead             | ppm      | ASTM D5185m |           | <1          |          |          |
|   | Copper           | ppm      | ASTM D5185m |           | 10          |          |          |
|   | Tin              | ppm      | ASTM D5185m | >15       | 2           |          |          |
|   | Vanadium         | ppm      | ASTM D5185m |           | <1          |          |          |
|   | White Metal      | scalar   | *Visual     | NONE      | NONE        |          |          |
|   | Yellow Metal     | scalar   | *Visual     | NONE      | NONE        |          |          |
| CONTAMINATION   | Silicon          | nnm      | ASTM D5185m | > 25      | 8           |          |          |
| CONTAMINATION   | Potassium        | ppm      | ASTM D5185m |           | 4           |          |          |
| There is no indication of any contamination in the oil.   | Fuel             | ppm      |             | >2.0      | +<br><1.0   |          |          |
|   | Water            |          | WC Method   |           | NEG         |          |          |
|   | Glycol           |          | WC Method   | >0.2      | NEG         |          |          |
|   | Soot %           | %        | *ASTM D7844 | . 2       | 0.1         |          |          |
|   | Nitration        | Abs/cm   | *ASTM D7644 | >3<br>>20 | 9.2         |          |          |
|   | Sulfation        | Abs/.1mm | *ASTM D7024 |           | 9.2<br>19.1 |          |          |
|   | 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         |          |          |
|   |                  | Scalai   | visual      | 20.2      | NLG         |          |          |
| FLUID CONDITION   | Sodium           | ppm      | ASTM D5185m |           | 4           |          |          |
|   | Boron            | ppm      | ASTM D5185m |           | 4           |          |          |
| 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. | Barium           | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Molybdenum       | ppm      | ASTM D5185m |           | 5           |          |          |
|   | Manganese        | ppm      | ASTM D5185m |           | <1          |          |          |
|   | Magnesium        | ppm      | ASTM D5185m |           | 44          |          |          |
|   | Calcium          | ppm      | ASTM D5185m | 2300      | 4606        |          |          |
|   | Phosphorus       | ppm      | ASTM D5185m |           | 883         |          |          |
|   | Zinc             | ppm      | ASTM D5185m | 1200      | 1125        |          |          |
|   | Sulfur           | ppm      | ASTM D5185m |           | 3969        |          |          |
|   | Oxidation        | Abs/.1mm | *ASTM D7414 | >25       | 10.4        |          |          |
|   | Base Number (BN) | mg KOH/g | ASTM D2896  |           | 13.40       |          |          |
|   |                  | ~C+      |             | 15.5      | 10.0        |          |          |

Visc @ 100°C cSt

ASTM D445 15.5

13.3





Contact/Location: CHARLES FLATT - ZACCAR Page 2 of 2