WEAR CONTAMINATION **FLUID CONDITION**

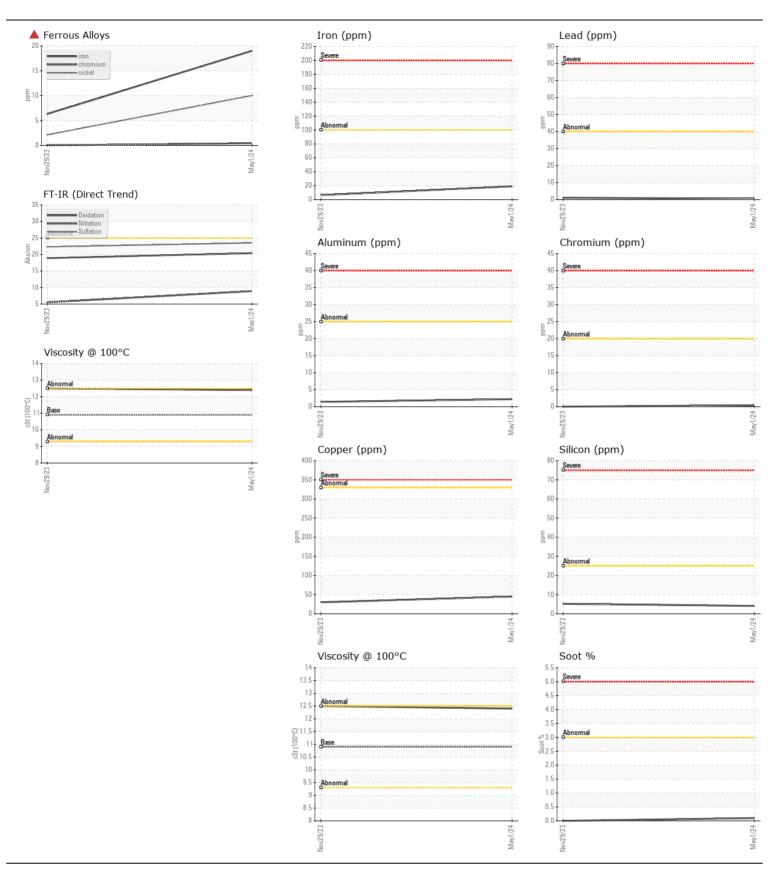
SEVERE NORMAL NORMAL

[8-402591]



Diesel Engine

| DIESEL ENGINE OIL SAE 10W | 30 (GAL) | | | | | | |
|--|-------------------|----------|-------------------------|-----------|-------------|-------------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. | Sample Number | | Client Info | | VCP448178 | VCP394339 | |
| | Sample Date | | Client Info | | 01 May 2024 | 29 Nov 2023 | |
| | Machine Age | hrs | Client Info | | 1973 | 1450 | |
| | Oil Age | hrs | Client Info | | 0 | 0 | |
| | Filter Age | hrs | Client Info | | 0 | 0 | |
| | Oil Changed | | Client Info | | Changed | Not Changd | |
| | Filter Changed | | Client Info | | Changed | Not Changd | |
| | Sample Status | | | | SEVERE | NORMAL | |
| WEAR | Iron | ppm | ASTM D5185(m) | >100 | 19 | 6 | |
| Nickel ppm levels are severe. Exhaust valve wear is indicated. | Chromium | ppm | ASTM D5185(m) | >20 | <1 | 0 | |
| | Nickel | ppm | ASTM D5185(m) | >2 | 1 0 | 2 | |
| | Titanium | ppm | ASTM D5185(m) | | <1 | 0 | |
| | Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | |
| | Aluminum | ppm | ASTM D5185(m) | >25 | 2 | 1 | |
| | Lead | ppm | ASTM D5185(m) | >40 | <1 | 1 | |
| | Copper | ppm | ASTM D5185(m) | >330 | 45 | 30 | |
| | Tin | ppm | ASTM D5185(m) | >15 | <1 | 0 | |
| | Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | |
| CONTAMINATION | Silicon | | ACTM DE10E/m) | . 05 | 4 | | |
| | | ppm | ASTM D5185(m) | | 4 | 5 | |
| There is no indication of any contamination in the oil. | Potassium Fuel | ppm | ASTM D5185(m) WC Method | >6.0 | <1 | 0 <1.0 | |
| | Water | | WC Method | | <1.0 NEG | NEG | |
| | Glycol | | WC Method | >0.2 | NEG | NEG | |
| | Soot % | % | ASTM D7844* | >3 | 0.1 | 0 | |
| | Nitration | Abs/cm | ASTM D7624* | >20 | 8.9 | 5.5 | |
| | Sulfation | Abs/.1mm | | >30 | 23.5 | 22.3 | |
| | Emulsified Water | | Visual* | >0.2 | NEG | NEG | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185(m) | | 2 | 2 | |
| The oil is no longer serviceable as a result of the abnormal and/or severe wear. | Boron | ppm | ASTM D5185(m) | 250 | 31 | 60 | |
| | Barium | ppm | ASTM D5185(m) | 10 | 0 | <1 | |
| | Molybdenum | ppm | ASTM D5185(m) | 100 | 40 | 40 | |
| | Manganese | ppm | ASTM D5185(m) | | 1 | 0 | |
| | Magnesium | ppm | ASTM D5185(m) | 450 | 536 | 528 | |
| | Calcium | ppm | ASTM D5185(m) | 3000 | 1722 | 1709 | |
| | Phosphorus | ppm | ASTM D5185(m) | 1150 | 954 | 943 | |
| | Zinc | ppm | ASTM D5185(m) | 1350 | 1123 | 1105 | |
| | Sulfur | ppm | ASTM D5185(m) | 4250 | 2468 | 2544 | |
| | Oxidation | Abs/.1mm | ASTM D7414* | >25 | 20.4 | 18.9 | |
| | Visc @ 100°C | cSt | ASTM D7279(m) | 10.9 | 12.4 | 12.5 | |





CALA ISO 17025:2017 Accredited Laboratory

Sample No.

Laboratory

Lab Number : 02634921 Unique Number : 5776074 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : VCP448178 : 13 May 2024 **Tested** : 13 May 2024

Diagnosed

: 13 May 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CRH CANADA GROUP INC.

P.O. BOX 5400 CONCORD, ON CA L4K 1B6 Contact: Dan Brown

dan.brown@ca.crh.com T:

F: