



| | |
|-----------------|-----------------|
| WEAR | NORMAL |
| CONTAMINATION | MARGINAL |
| FLUID CONDITION | NORMAL |

Machine Id
555 UNIVERSITY AVE, TORONTO UNIT 2 SICK KIDS DD16E0010224

Component
Rear Diesel Engine

Fluid
ESSO XD-3 EXTRA SAE 30 (350 LTR)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. this testkit includes BN to determine the suitability of the oil for continued use.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | PN0006285 | PN0003922 | PN0001190 |
| Sample Date | | Client Info | | 04 Jun 2024 | 24 Aug 2022 | 20 May 2020 |
| Machine Age | hrs | Client Info | | 1126 | 1079 | 1000 |
| Oil Age | hrs | Client Info | | 27 | 0 | 26 |
| Filter Age | hrs | Client Info | | 27 | 0 | 26 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | MARGINAL | MARGINAL | ABNORMAL |

WEAR

Component wear rates appear to be normal (unconfirmed).

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >200 | 7 | <1 | 2 |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >30 | <1 | 2 | <1 |
| Lead | ppm | ASTM D5185(m) | >30 | 4 | 0 | 4 |
| Copper | ppm | ASTM D5185(m) | >30 | 134 | 0 | 95 |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

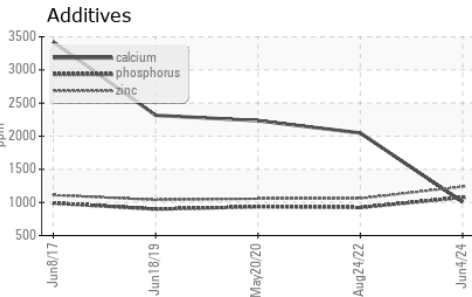
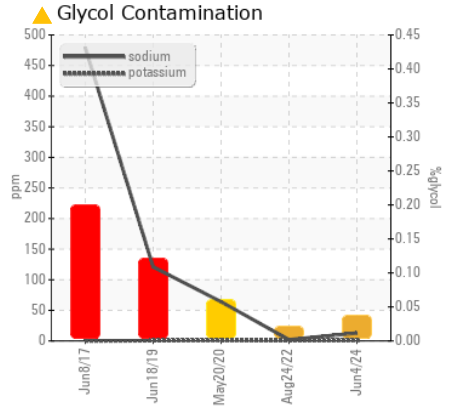
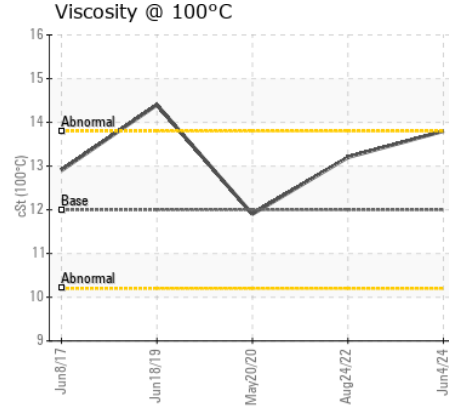
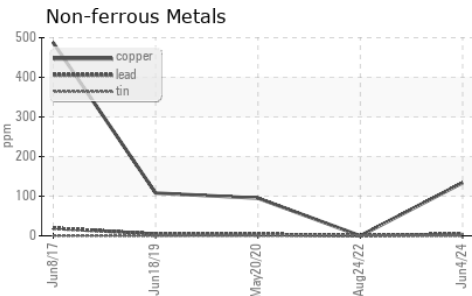
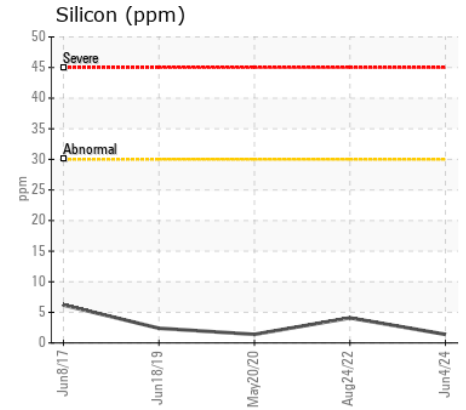
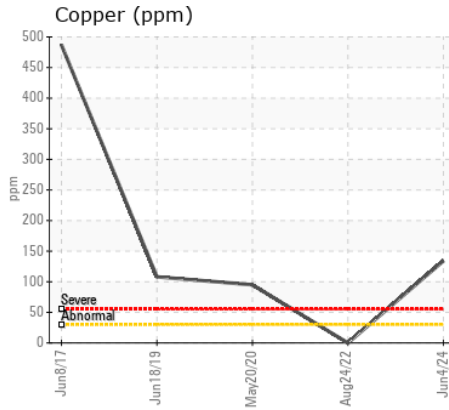
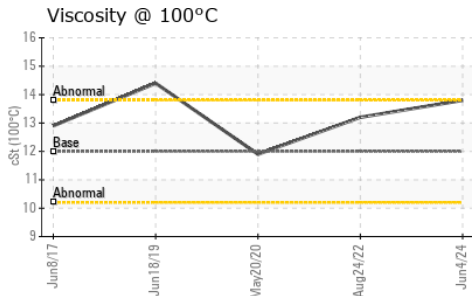
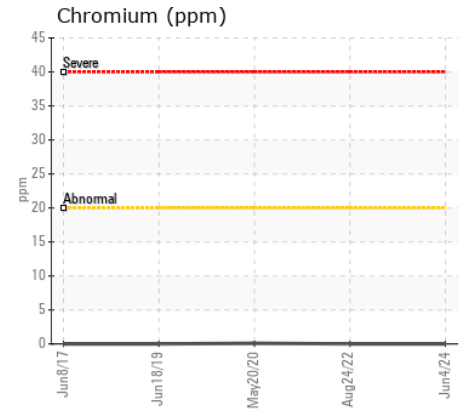
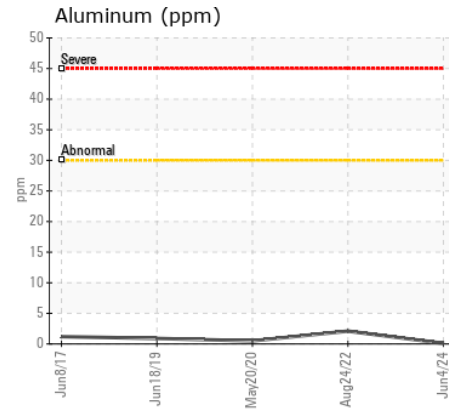
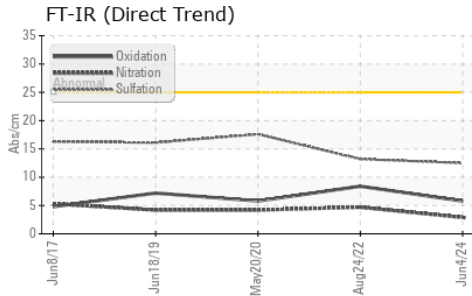
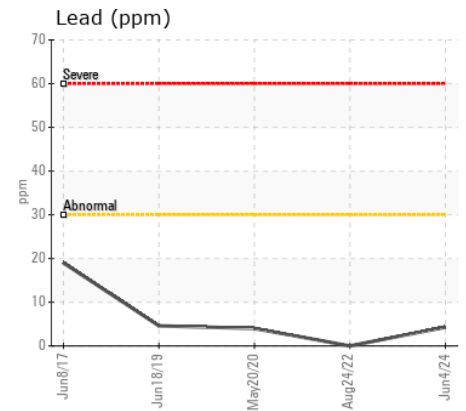
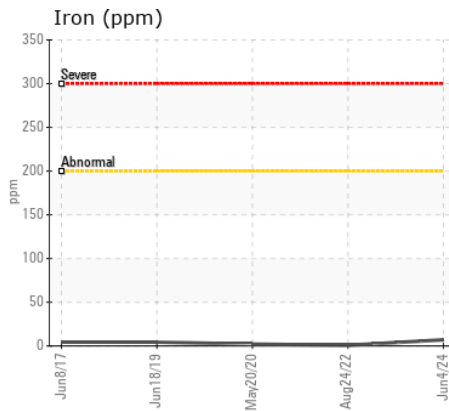
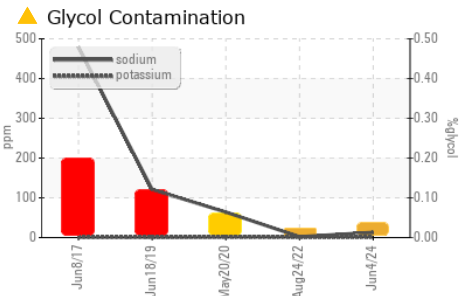
Test for glycol is positive. There is a light concentration of glycol present in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|---------|--------|
| Silicon | ppm | ASTM D5185(m) | >30 | 1 | 4 | 1 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | <1 | 1 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | ▲ 1.8 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | % | ASTM D7922* | | ▲ 0.037 | ▲ 0.021 | ▲ 0.06 |
| Soot % | % | ASTM D7844* | >3 | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 2.9 | 4.7 | 4.2 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 12.5 | 13.2 | 17.6 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|--------------|----------|---------------|------|-------------|------|--------|
| Sodium | ppm | ASTM D5185(m) | >16 | 13 | 2 | ● 64 |
| Boron | ppm | ASTM D5185(m) | | 2 | 67 | 17 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | 74 | 13 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 910 | 33 | 83 |
| Calcium | ppm | ASTM D5185(m) | 2550 | 1008 | 2048 | 2234 |
| Phosphorus | ppm | ASTM D5185(m) | 1000 | 1076 | 923 | 934 |
| Zinc | ppm | ASTM D5185(m) | 1120 | 1238 | 1059 | 1056 |
| Sulfur | ppm | ASTM D5185(m) | | 2678 | 3020 | 2791 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 5.8 | 8.4 | 5.8 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 12.0 | 13.8 | 13.2 | ▲ 11.9 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0006285 **Received** : 11 Jun 2024
Lab Number : 02641025 **Tested** : 11 Jun 2024
Unique Number : 5798564 **Diagnosed** : 11 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

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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.