



OIL ANALYSIS REPORT

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

Machine Id
D/G #3
 Component
3 Diesel Engine
 Fluid
SHELL 15W40 (13 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0722086 | WC0722073 | WC0693934 |
| Sample Date | | Client Info | | 22 Apr 2023 | 13 Sep 2022 | 02 Jul 2022 |
| Machine Age | hrs | Client Info | | 0 | 11334 | 10826 |
| Oil Age | hrs | Client Info | | 0 | 500 | 500 |
| Filter Age | hrs | Client Info | | 0 | 500 | 500 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|-----|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >51 | 10 | 10 | 10 |
| Chromium | ppm | ASTM D5185(m) | >11 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >5 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >31 | 1 | 1 | 1 |
| Lead | ppm | ASTM D5185(m) | >26 | 4 | 4 | <1 |
| Copper | ppm | ASTM D5185(m) | >26 | 1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

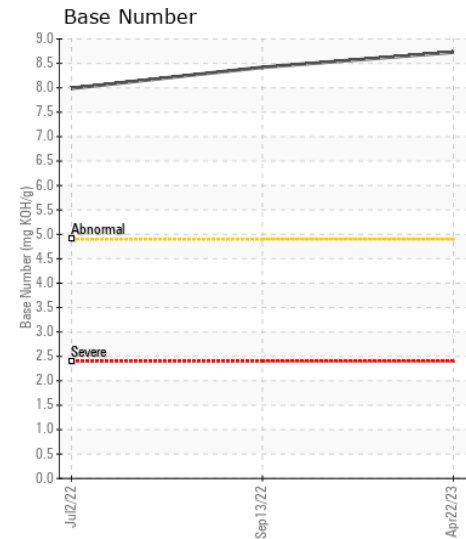
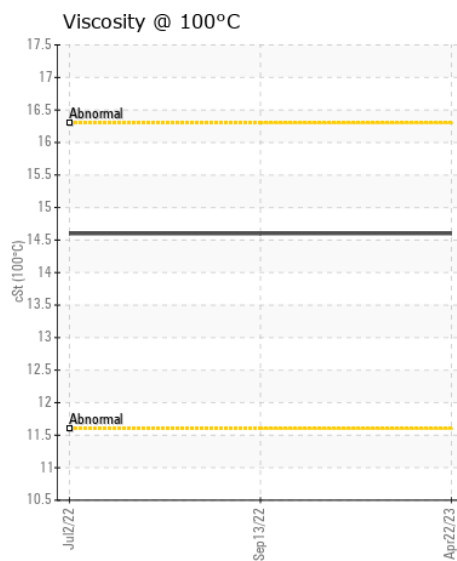
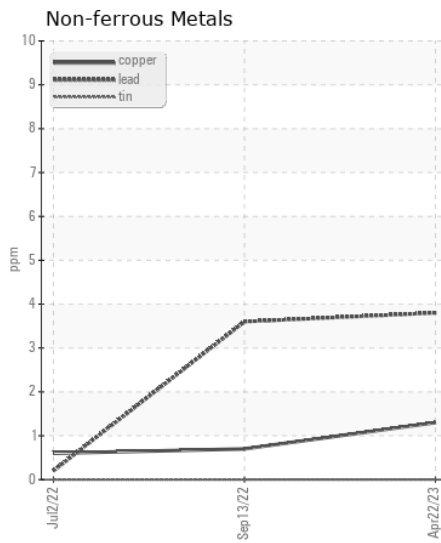
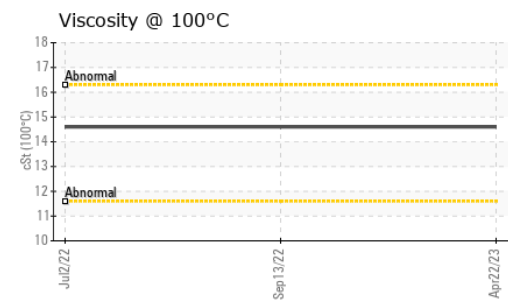
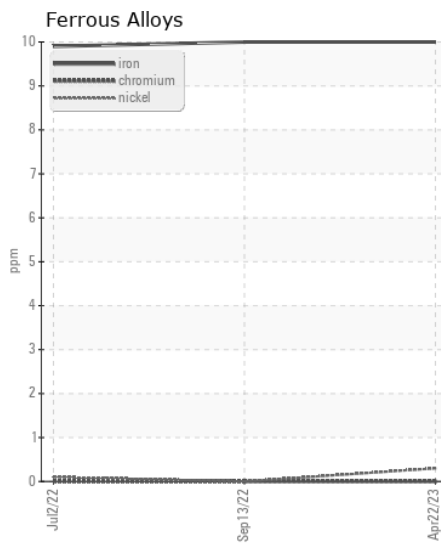
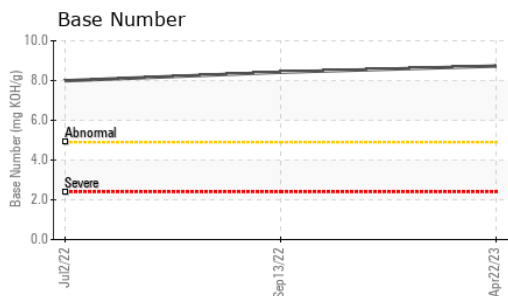
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|-------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >22 | 4 | 3 | 3 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 1 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 8.0 | 8.9 | 6.5 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.3 | 21.2 | 17.8 |
| Emulsified Water | scalar | Visual* | >0.21 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|------------------|----------|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | >150 | 2 | 2 | 3 |
| Boron | ppm | ASTM D5185(m) | | 17 | 19 | 80 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 64 | 63 | 63 |
| Manganese | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 917 | 855 | 465 |
| Calcium | ppm | ASTM D5185(m) | | 1331 | 1408 | 1755 |
| Phosphorus | ppm | ASTM D5185(m) | | 1094 | 1084 | 1132 |
| Zinc | ppm | ASTM D5185(m) | | 1244 | 1245 | 1240 |
| Sulfur | ppm | ASTM D5185(m) | | 2773 | 2863 | 3269 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 16.9 | 18.4 | 12.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | | 8.73 | 8.42 | 7.99 |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 14.6 | 14.6 | 14.6 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **CANSHIP UGLAND - CRT EXPRESS**
Sample No. : WC0722086 **Received** : 28 Apr 2023 1315 TOPSAIL ROAD, PO BOX 8040 STN A
Lab Number : 02554065 **Diagnosed** : 28 Apr 2023 ST JOHNS, NL
Unique Number : 5567080 **Diagnostician** : Wes Davis CA A1B 3M7
Test Package : MAR 2 Contact: Peter Collins
 technical@canship.com

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.