

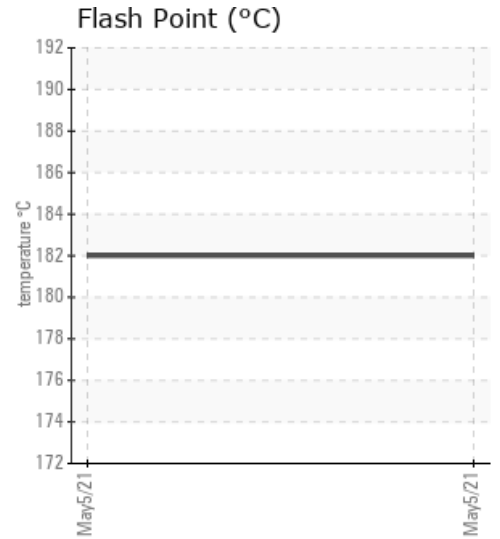
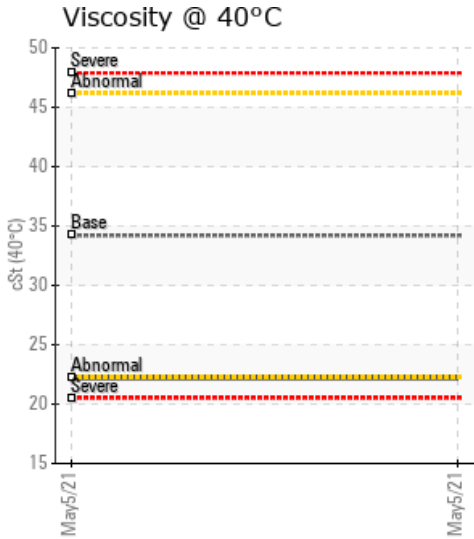
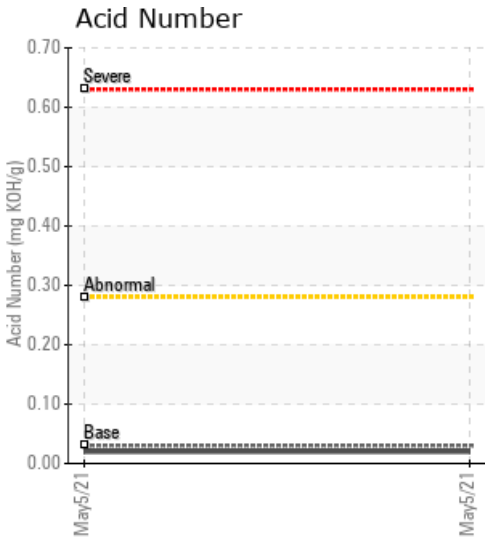
## [12-22-007-11W2] RIDGEBACK

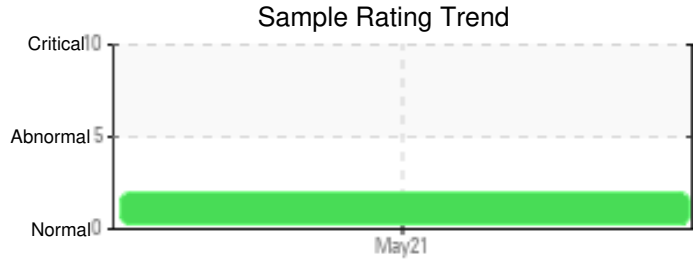
| Customer: PTRHTF20252  | System Information  | Sample Information  |
|--|---|---|
| Ridgeback<br>585 Maplewind Road<br>Stoughton, SK S0G 4T0 Canada<br>Attn: Lucas Tibiero<br>Tel:<br>E-Mail: ltibiero@ridgeback.com | System Volume: 11000 ltr<br>Bulk Operating Temp: Not Specified<br>Heating Source:<br>Blanket:<br>Fluid: PETRO CANADA PETRO-THERM<br>Make: HEATECH | Lab No: 02420351<br>Analyst: Kevin McDermott<br>Sample Date: 05/05/21<br>Received Date: 05/11/21<br>Completed: 05/18/21<br>Kevin McDermott<br>kevin.mcdermott@hollyfrontier.com |

Recommendation: Fluid is in very good condition. No sign of thermal degradation or oxidation. The reduced flash point, viscosity and IBP (initial boiling point) are all symptoms from the recent exchanger leak. Periodic venting of the surge tank will improve these values. Suggest submitting another sample in 3 months after venting the surge tank a few times.

Comments:

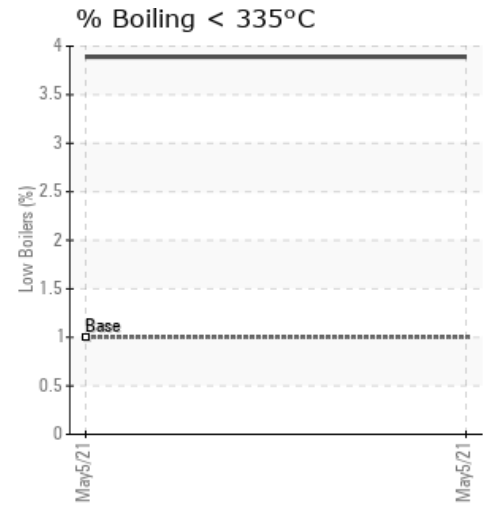
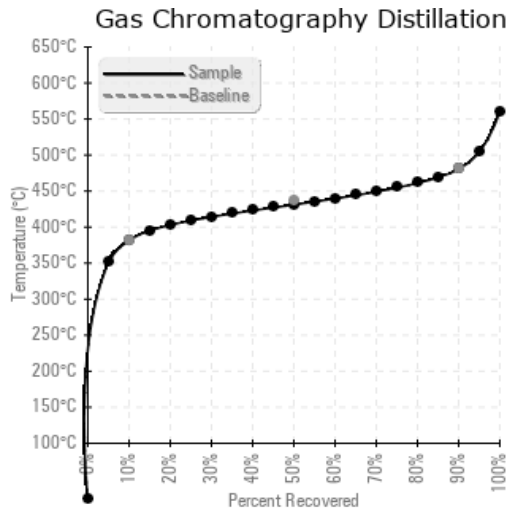
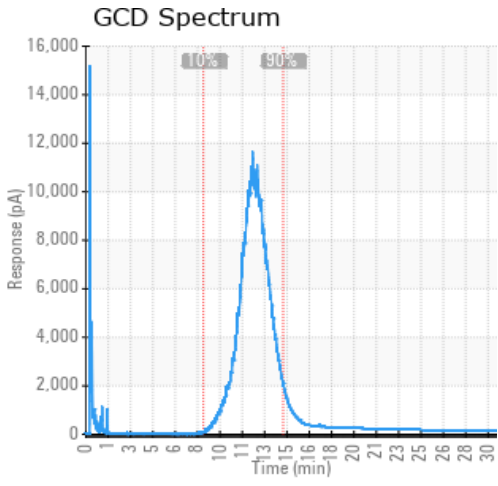
| Sample Date   | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10%   | GCD 50%   | GCD 90%   | GCD % < 335°C |
|---------------|---------------|-----------|-----------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
|               | mm/dd/yy      |           |                 | °F/°C             | ppm        | cSt              | mg/KOH/g    | %wt    | °F/°C     | °F/°C     | °F/°C     | %             |
| 05/05/21      | 05/11/21      | 1.0m      | Expansion tank  | 360 / 182         | 6.2        | 22.2             | 0.02        | 0.039  | 719 / 382 | 808 / 431 | 897 / 481 | 3.89          |
| Baseline Data |               |           |                 | 433 / 223         |            | 34.2             | 0.03        |        | 720 / 382 | 817 / 436 | 900 / 482 | 1.00          |





| Sample Date          | Iron | Chromium | Nickel | Aluminum | Copper | Lead | Tin | Cadmium | Silver | Vanadium | Silicon | Sodium | Potassium | Titanium | Molybdenum | Antimony | Manganese | Lithium | Boron | Magnesium | Calcium | Barium | Phosphorus | Zinc |
|----------------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 05/05/21             | 6    | 0        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 0       | 0      | 0         | 0        | 0          | 0        | 0         | 0       | 0     | 0         | 0       | 0      | 1          | 0    |
| <b>Baseline Data</b> |      |          | 0      | 0        |        |      |     |         |        | 0        |         |        | 0         | 0        |            |          |           | 0       |       |           |         |        | 0          |      |

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



### Historical Comments

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