

## Machine Id B37302 CENTRAL HYDRAULIC

## Hydraulic System

## PETRO CANADA PURITY FG AW HYDRAULIC 32 (200 GAL)

| RECOMMENDATION  | Test             | UOM    | Method                     | Limit/Abn | Current     | History1    | History2    |
|---|------------------|--------|----------------------------|-----------|-------------|-------------|-------------|
| We recommend you service the filters on this component. Resample at the next service interval to monitor. | Sample Number    |        | Client Info                |           | WC0736172   | WC0610664   | WC0585089   |
|   | Sample Date      |        | Client Info                |           | 14 Nov 2023 | 09 Nov 2021 | 17 Aug 2021 |
|   | Machine Age      | hrs    | Client Info                |           | 0           | 0           | 0           |
|   | Oil Age          | hrs    | Client Info                |           | 0           | 0           | 0           |
|   | Filter Age       | hrs    | Client Info                |           | 0           | 0           | 0           |
|   | Oil Changed      |        | Client Info                |           | N/A         | Not Changd  | N/A         |
|   | Filter Changed   |        | Client Info                |           | N/A         | 0           | N/A         |
|   | Sample Status    |        |                            |           | ABNORMAL    | ABNORMAL    | ABNORMAL    |
| WEAR  | Iron             | ppm    | ASTM D5185m                | >20       | 6           | 4           | 6           |
|   | Chromium         | ppm    | ASTM D5185m                | >20       | <1          | <1          | <1          |
| All component wear rates are normal.  | Nickel           | ppm    | ASTM D5185m                | >20       | 0           | 0           | 0           |
|   | Titanium         | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Silver           | ppm    | ASTM D5185m                |           | 0           | 0           | <1          |
|   | Aluminum         | ppm    | ASTM D5185m                | >20       | 0           | <1          | 0           |
|   | Lead             | ppm    | ASTM D5185m                | >20       | <1          | 1           | 1           |
|   | Copper           | ppm    | ASTM D5185m                | >20       | <1          | 1           | 2           |
|   | Tin              | ppm    | ASTM D5185m                | >20       | 0           | 0           | 0           |
|   | Vanadium         | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | White Metal      | scalar | *Visual                    | NONE      | NONE        | LIGHT       | A MODER     |
|   | Yellow Metal     | scalar | *Visual                    | NONE      | NONE        | NONE        | NONE        |
| CONTAMINATION   | Silicon          | ppm    | ASTM D5185m                | <15       | 2           | 2           | 2           |
| CONTAMINATION   | Potassium        | ppm    | ASTM D5185m                |           | 0           | 0           | <1          |
| There is a high amount of particulates present in the oil.  | Water            | ppiii  | WC Method                  |           | NEG         | NEG         | NEG         |
|   | Particles >4µm   |        | ASTM D7647                 | 20.00     | 22317       | 22293       |             |
|   | Particles >6µm   |        | ASTM D7647                 | >1300     | ▲ 6605      | ▲ 6494      |             |
|   | Particles >14µm  |        | ASTM D7647                 |           | <b>496</b>  | ▲ 596       |             |
|   | Particles >21µm  |        | ASTM D7647                 |           | <b>108</b>  | ▲ 139       |             |
|   | Particles >38µm  |        | ASTM D7647                 | >10       | 4           | <b>1</b> 5  |             |
|   | Particles >71µm  |        | ASTM D7647                 | >3        | 0           | 2           |             |
|   | Oil Cleanliness  |        | ISO 4406 (c)               | >-/17/14  | <u> </u>    | ▲ 22/20/16  |             |
|   | Silt             | scalar | *Visual                    | NONE      | NONE        | NONE        | NONE        |
|   | Debris           | scalar | *Visual                    | NONE      | NONE        | LIGHT       | NONE        |
|   | Sand/Dirt        | scalar | *Visual                    | NONE      | NONE        | NONE        | NONE        |
|   | Appearance       | scalar | *Visual                    | NORML     | NORML       | NORML       | NORML       |
|   | Odor             | scalar | *Visual                    | NORML     | NORML       | NORML       | NORML       |
|   | Emulsified Water | scalar | *Visual                    | >0.05     | NEG         | NEG         | NEG         |
| FLUID CONDITION   | Sodium           | nom    | ASTM D5185m                |           | 3           | 2           | 1           |
| I LOID CONDITION  | Boron            | ppm    | ASTM D5185m<br>ASTM D5185m |           | 0           | 0           | 0           |
| The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.      | Barium           | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Molybdenum       | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Manganese        | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Magnesium        | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Calcium          | ppm    | ASTM D5185m                |           | 0           | 0           | 0           |
|   | Phosphorus       | ppm    | ASTM D5185m                |           | 474         | 416         | 467         |
|   | Zinc             | ppm    | ASTM D5185m                |           | 63          | 64          | 64          |
|   |                  |        |                            |           |             |             |             |

Sulfur

ppm ASTM D5185m

Acid Number (AN) mg KOH/g ASTM D8045 0.26

Visc @ 40°C cSt ASTM D445 29.77

420

32.3

0.221

459

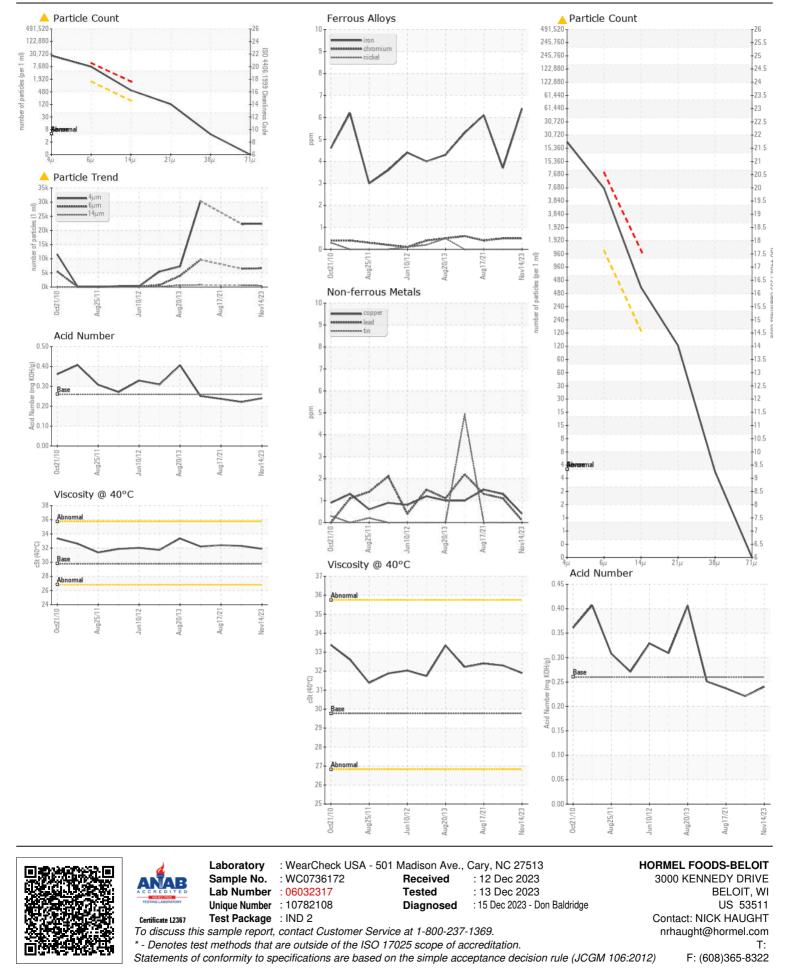
0.237

32.4

520

0.24

31.9



Contact/Location: NICK HAUGHT - HORBEL Page 2 of 2