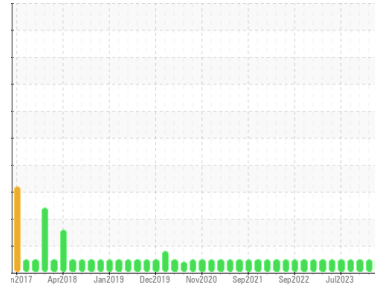




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**MP-131**  
 Machine Id  
**B28460 - CHALLENGE TUMBLER #1 HYDRAULIC PUMP**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA PURITY FG AW HYDRAULIC 46 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0894885</b>	WC0872494	WC0856009
Sample Date	Client Info		<b>16 Feb 2024</b>	27 Dec 2023	23 Oct 2023
Machine Age	days	Client Info	<b>0</b>	0	0
Oil Age	days	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	2	1
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >20	<b>2</b>	2	2
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	9
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	<b>0</b>	<1	0
Calcium	ppm	ASTM D5185m	<b>2</b>	<1	0
Phosphorus	ppm	ASTM D5185m	<b>416</b>	438	420
Zinc	ppm	ASTM D5185m	<b>8</b>	2	0
Sulfur	ppm	ASTM D5185m	<b>465</b>	475	476

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>2</b>	<1	2
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	1

## FLUID CLEANLINESS

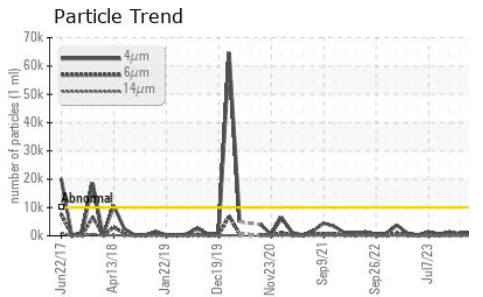
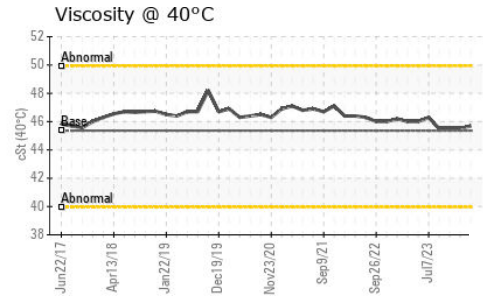
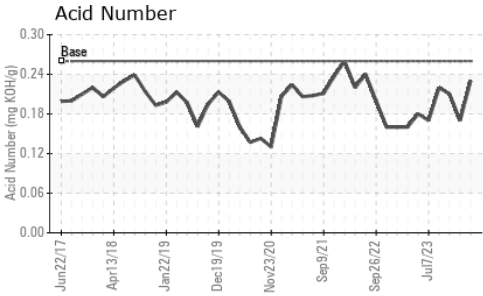
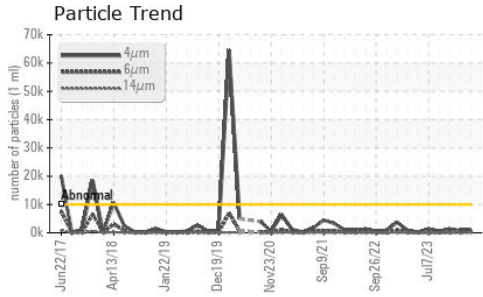
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>1040</b>	825	1324
Particles >6µm	ASTM D7647	>1300	<b>399</b>	246	227
Particles >14µm	ASTM D7647	>160	<b>43</b>	30	18
Particles >21µm	ASTM D7647	>40	<b>11</b>	9	5
Particles >38µm	ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/17/14	<b>17/16/13</b>	17/15/12	18/15/11

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.26	<b>0.23</b>	0.17	0.21



# OIL ANALYSIS REPORT

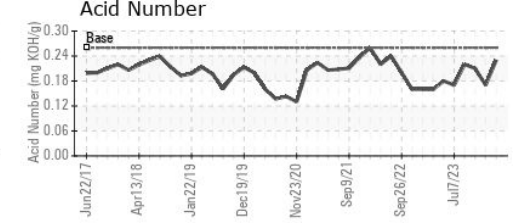
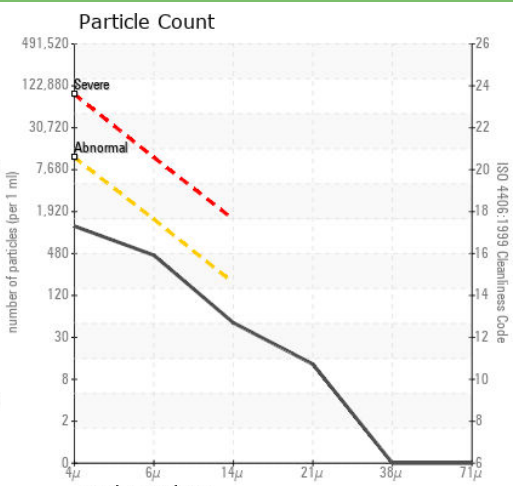
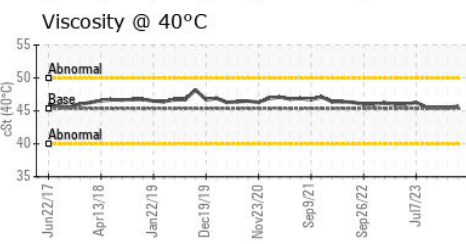
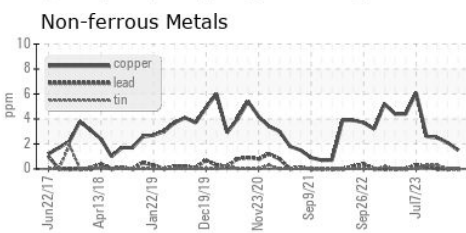
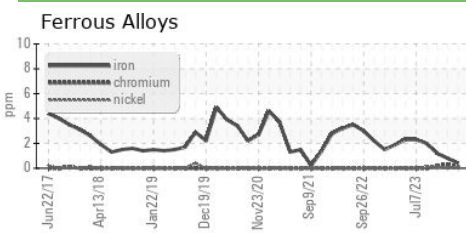


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	45.36	<b>45.7</b>	45.5	45.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0894885      **Received** : 22 Feb 2024  
**Lab Number** : 06097661      **Tested** : 23 Feb 2024  
**Unique Number** : 10890514      **Diagnosed** : 23 Feb 2024 - Wes Davis  
**Test Package** : IND 2

**HORMEL FOODS - AUSTIN**  
 1101 NORTH MAIN ST  
 AUSTIN, MN  
 US 55912  
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 rslowe@hormel.com  
 T: (507)437-5674  
 F: (507)437-9805

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)