

## HPP [10024330875] **VESSEL 3 PUMP 2 (S/N B44046)**

## Hydraulic System

PETRO CANADA PURITY FG AW HYDRAULIC 46 (90 GAL)

## RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.



All component wear rates are normal.

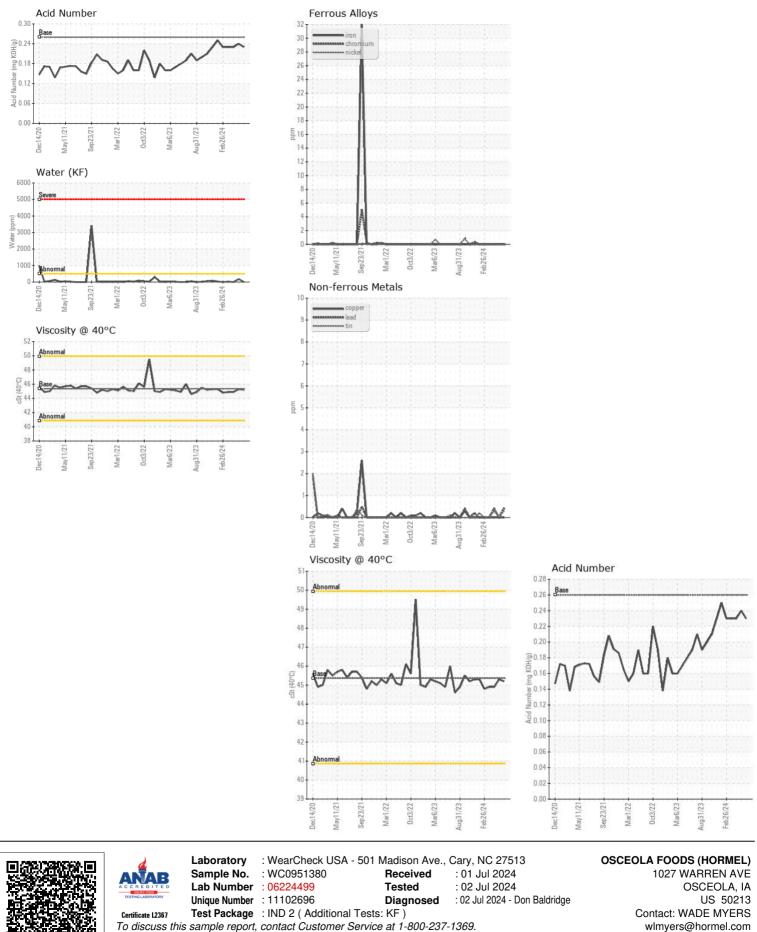
## **CONTAMINATION**

Moderate concentration of visible dirt/debris present in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0951380	WC0936579	WC0802559
Sample Date		Client Info		25 Jun 2024	28 May 2024	30 Apr 2024
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	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
				•		
Iron	ppm	ASTM D5185m	>20	0	0	0
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	0	0
Lead	ppm	ASTM D5185m	>20	<1	0	<1
Copper	ppm	ASTM D5185m	>20	0	0	0
Tin	ppm	ASTM D5185m	>20	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Ciliaan			. 4 5	4	0	0
Silicon	ppm	ASTM D5185m	>15	4	3	3
Potassium	ppm	ASTM D5185m		<1	2	2
Water	%	ASTM D6304	>0.05	0.00	0.018	0.00
ppm Water	ppm	ASTM D6304		0	180	0
Particles >4µm		ASTM D7647	>10000		205	60
Particles >6µm		ASTM D7647			64	5
Particles >14µm		ASTM D7647	>160		7	0
Particles >21µm		ASTM D7647			3	0
Particles >38µm		ASTM D7647	>10		0	0
Particles >71µm		ASTM D7647			0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/14		15/13/10	13/10/7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE		NONE	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
Sodium	ppm	ASTM D5185m		0	2	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium		ASTM D5185m		0	<1	0
Molybdenum	ppm ppm	ASTM D5185m		0	0	0
Manganese		ASTM D5185m		0 <1	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	1
Calcium	ppm	ASTM D5185m		0	1	2
	ppm				453	2 448
Phosphorus	ppm	ASTM D5185m		473		
Zinc	ppm	ASTM D5185m		6	6	0
Sulfur	ppm	ASTM D5185m	0.00	543	583	583
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	0.23	0.24	0.23
Visc @ 40°C	cSt	ASTM D445	45.36	45.2	45.3	44.9



\* - 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)

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