

## **OIL ANALYSIS REPORT**

Sample Rating Trend

### NORMAL

# 74995 PROMENADE RETURN TENSION

Hydraulic System

PETRO CANADA HARMONY HVI 36 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### 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 condition of the oil is acceptable for the time in service.

		NO
Mar2023	Mar2024	

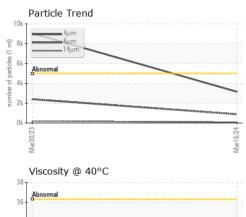
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0686005	WC0800985	
Sample Date		Client Info		16 Mar 2024	30 Mar 2023	
Machine Age	hrs	Client Info		18437	17923	
Oil Age	hrs	Client Info		18437	11320	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	ATTENTION	
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0	<1	
Chromium	ppm	ASTM D5185(m)	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>20	0	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	0	
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	
Lead	ppm	ASTM D5185(m)	>20	0	0	
Copper	ppm	ASTM D5185(m)	>20	<1	2	
Tin	ppm	ASTM D5185(m)	>20	0	0	
Antimony	ppm	ASTM D5185(m)		0	<1	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current	history1 <1	history2
	ppm ppm		limit/base			
Boron		ASTM D5185(m)	limit/base	<1	<1	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	<1 0	<1 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	<1 0 0	<1 0 0	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110	<1 0 0 0	<1 0 0 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110	<1 0 0 0 37	<1 0 0 0 4	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360	<1 0 0 37 57	<1 0 0 0 4 143	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360	<1 0 0 37 57 301	<1 0 0 0 4 143 263	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360 420	<1 0 0 37 57 301 381	<1 0 0 4 143 263 323	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360 420	<1 0 0 37 57 301 381 671	<1 0 0 4 143 263 323 773	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710	<1 0 0 37 57 301 381 671 <1	<1 0 0 4 143 263 323 773 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>limit/base</b>	<1 0 0 37 57 301 381 671 <1 vurrent	<1 0 0 4 143 263 323 773 <1 history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>limit/base</b> >15	<1 0 0 37 57 301 381 671 <1 current 0	<1 0 0 4 143 263 323 773 <1 history1 0	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>limit/base</b> >15	<1 0 0 37 57 301 381 671 <1 current 0 1	<1 0 0 4 143 263 323 773 <1 history1 0 <1	       history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>Imit/base</b> >15 >20	<1 0 0 37 57 301 381 671 <1 current 0 1 <1	<1 0 0 4 143 263 323 773 <1 history1 0 <1 <1	       history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>Imit/base</b> >15 >20 <b>Imit/base</b> >20	<1 0 0 37 57 301 381 671 <1 <1 <b>current</b> 0 1 <1 <1	<1 0 0 4 143 263 323 773 <1 <u>history1</u> 0 <1 <1 <1 history1	      history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>Imit/base</b> >15 >20 <b>Imit/base</b> >20	<1 0 0 37 57 301 381 671 <1 <i>current</i> 0 1 <1 <i>current</i> 3147	<1 0 0 4 143 263 323 773 <1 history1 0 <1 <1 <1 history1	      history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	110 60 360 420 710 <b>imit/base</b> >15 >20 <b>imit/base</b> >5000 >1300 >160	<1 0 0 37 57 301 381 671 <1 current 0 1 <1 <1 0 1 3147 876	<1 0 0 4 143 263 323 773 <1 <b>history1</b> 0 <1 <1 <1 history1 9048 9048	      history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	110 60 360 420 710 <b>imit/base</b> >15 >20 <b>imit/base</b> >5000 >1300 >160	<1 0 0 37 57 301 381 671 <1 <i>current</i> 0 1 <1 <1 3147 876 75	<1 0 0 4 143 263 323 773 <1 history1 0 <1 <1 <1 1 0 <1 <1 1 0 <2 3 7 3 2 3 7 3 2 3 7 3 2 3 7 3 2 3 7 3 2 3 7 3 2 3 7 3 2 3 7 3 7 3 2 3 7 3 7 3 2 3 7 7 3 7 5 7 7 5 5 5 5 5 5 5 5 5 5 5 5 5	       history2    history2.
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	110 60 360 420 710 <b>imit/base</b> >15 >20 <b>imit/base</b> >5000 >1300 >160 >40 >10	<1 0 0 37 57 301 381 671 <1 Current 0 1 <1 Current 3147 876 75 21	<1 0 0 4 143 263 323 773 <1 history1 0 <1 <1 <1 1 0 <1 <1 9048 9048 9048 2397 195 56	       history2  history2  history2

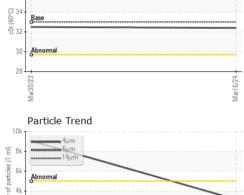
Report Id: MOUCOL [WCAMIS] 02626680 (Generated: 05/03/2024 08:55:14) Rev: 1

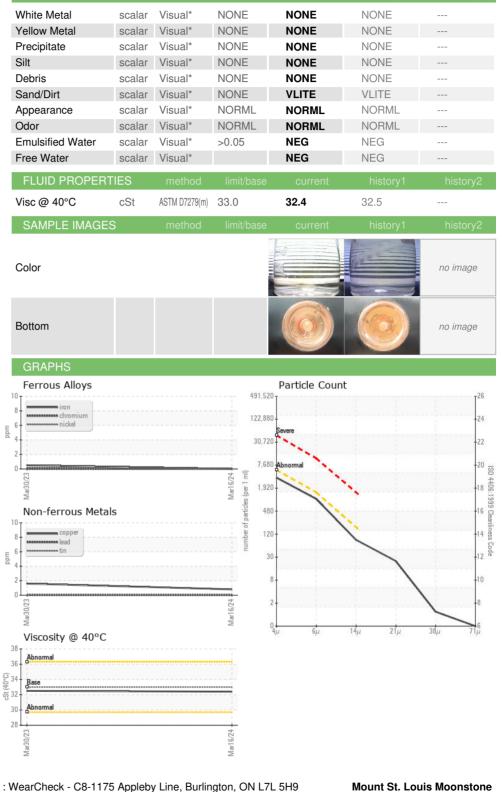
Contact/Location: Andre Huter - MOUCOL



## **OIL ANALYSIS REPORT**









0k

Mar30/23

 Accredited Laboratory
 Unique Number
 : 5759812
 Diagnosed
 : 05 Apr 2024 - Wes Davis

 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.

Received

Tested

: 04 Apr 2024

: 05 Apr 2024

: WC0686005

Mount St. Louis Moonstone R.R. # 4,, 24 Mount St. Louis Road Coldwater, ON CA L0K 1E0 Contact: Andre Huter a.huter@mslm.on.ca T: (705)835-2112 F: (705)835-5967

Report Id: MOUCOL [WCAMIS] 02626680 (Generated: 05/03/2024 08:55:14) Rev: 1

CALA

ISO 17025:2017

Laboratory

Sample No.

Lab Number : 02626680

Contact/Location: Andre Huter - MOUCOL Page 2 of 2