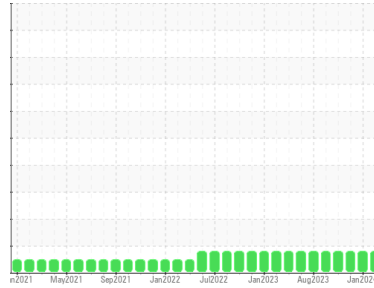


Area  
**INDEPENDENCE**  
 Machine Id  
**Unit 04 DB200104E**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON MONOGRADE HD 40W (250 GAL)**



## DIAGNOSIS

- Recommendation**  
 No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**  
 All component wear rates are normal.
- Contamination**  
 Light fuel dilution occurring.
- Fluid Condition**  
 The BN result indicates that there is suitable alkalinity remaining in the oil. 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>PCA0097016</b>	PCA0097008	PCA0097023
Sample Date	Client Info		<b>07 Feb 2024</b>	03 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info	<b>13357</b>	13300	13229
Oil Age	hrs	Client Info	<b>13357</b>	13300	13229
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>MARGINAL</b>	MARGINAL	MARGINAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	<b>15</b>	16	19
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>1</b>	2	2
Lead	ppm	ASTM D5185m	>30	<b>1</b>	2	2
Copper	ppm	ASTM D5185m	>35	<b>3</b>	3	4
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>4</b>	6	7
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	5	6
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>926</b>	953	1119
Calcium	ppm	ASTM D5185m		<b>1050</b>	1106	1268
Phosphorus	ppm	ASTM D5185m		<b>999</b>	989	1243
Zinc	ppm	ASTM D5185m		<b>1276</b>	1306	1543
Sulfur	ppm	ASTM D5185m		<b>2800</b>	3114	3345

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+100	<b>2</b>	3	3
Sodium	ppm	ASTM D5185m		<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel	%	ASTM D3524	>4.0	<b>▲ 3.6</b>	▲ 2.8	▲ 3.9

## INFRA-RED

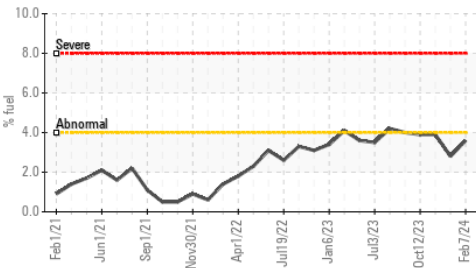
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.0</b>	5.0	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>14.3</b>	14.3	14.3

## FLUID DEGRADATION

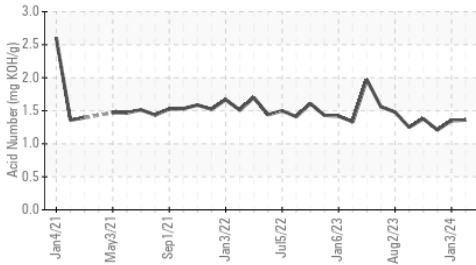
	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.3</b>	8.5	8.3
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.36</b>	1.35	1.21
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.23</b>	8.38	8.36

# OIL ANALYSIS REPORT

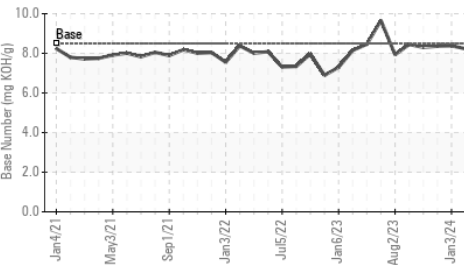
**Fuel Dilution**



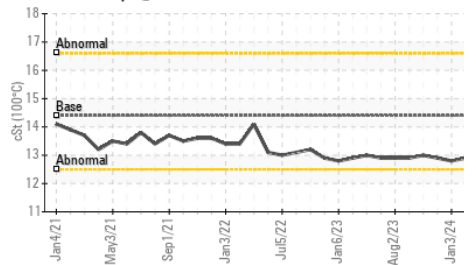
**Acid Number**



**Base Number**



**Viscosity @ 100°C**

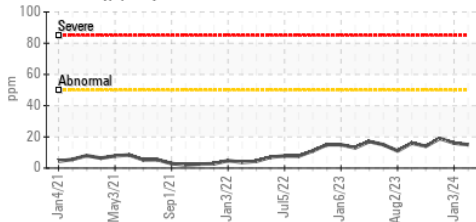


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

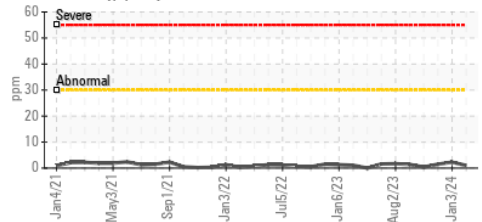
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.8

**GRAPHS**

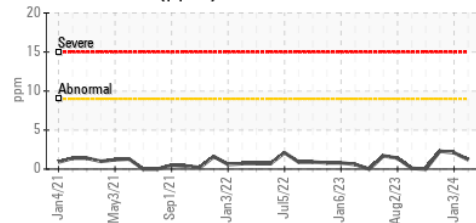
**Iron (ppm)**



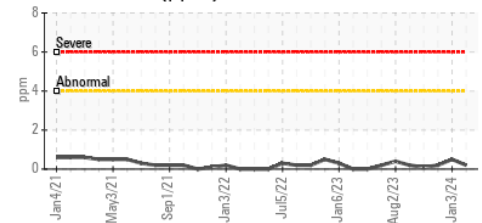
**Lead (ppm)**



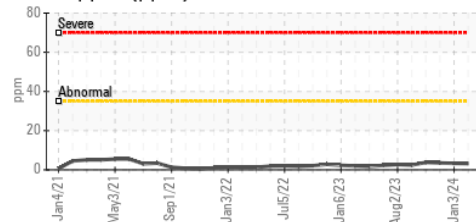
**Aluminum (ppm)**



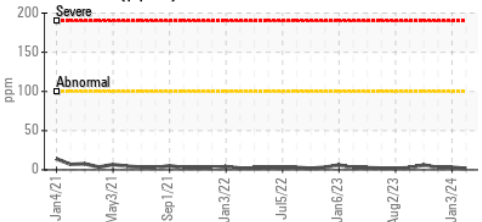
**Chromium (ppm)**



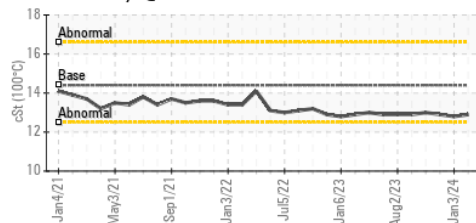
**Copper (ppm)**



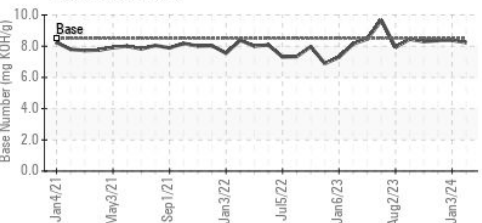
**Silicon (ppm)**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0097016 **Received** : 13 Feb 2024  
**Lab Number** : 06087603 **Tested** : 14 Feb 2024  
**Unique Number** : 10875048 **Diagnosed** : 14 Feb 2024 - Sean Felton  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**Magellan Midstream LP - Independence**  
 836 South Rosser Road  
 Independence, KS  
 US 67301  
 Contact: Heath James  
 heath.james@magellanlp.com  
 T: (620)779-2040  
 F:

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)