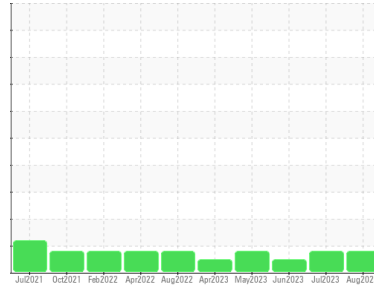


# OIL ANALYSIS REPORT

Sample Rating Trend



**FUEL**



Area  
**PONCA CITY**  
Machine Id  
**Unit 03 DB130103E**

Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA DURON MONOGRADE HD 40W (350 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. No other contaminants were detected in the oil.

### 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>PCA0045787</b>	PCA0045785	PCA0045783
Sample Date	Client Info	<b>01 Aug 2023</b>	06 Jul 2023	05 Jun 2023
Machine Age	hrs	Client Info	1122	1084
Oil Age	hrs	Client Info	1122	1084
Oil Changed	Client Info	<b>Not Changed</b>	Not Changed	Not Changed
Sample Status		<b>MARGINAL</b>	MARGINAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	<b>1</b>	6	8
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>3</b>	3	2
Lead	ppm	ASTM D5185m >30	<b>2</b>	2	2
Copper	ppm	ASTM D5185m >35	<b>1</b>	<1	1
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>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>1</b>	1	2
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>2</b>	2	2
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>903</b>	896	909
Calcium	ppm	ASTM D5185m	<b>1228</b>	1097	1152
Phosphorus	ppm	ASTM D5185m	<b>1148</b>	1094	1125
Zinc	ppm	ASTM D5185m	<b>1322</b>	1311	1350
Sulfur	ppm	ASTM D5185m	<b>3258</b>	3866	3781

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	<b>3</b>	3	4
Sodium	ppm	ASTM D5185m	<b>0</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	<1
Fuel	%	ASTM D3524 >4.0	<b>▲ 2.3</b>	▲ 2.3	1.8

## INFRA-RED

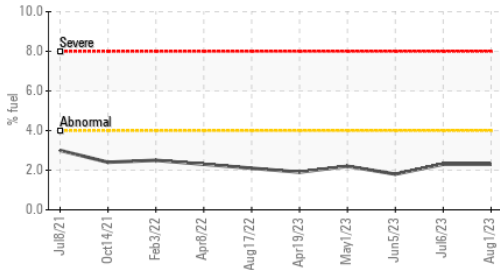
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>4.4</b>	4.8	4.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>13.1</b>	13.8	14.1

## FLUID DEGRADATION

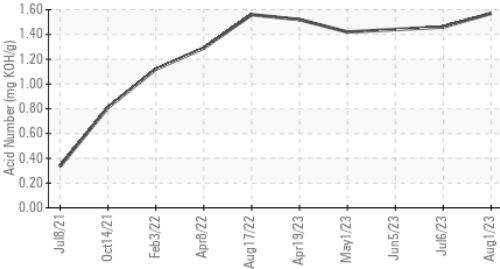
method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>7.3</b>	7.5	9.1
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.57</b>	1.46	1.44
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>8.15</b>	9.27	10.04

# OIL ANALYSIS REPORT

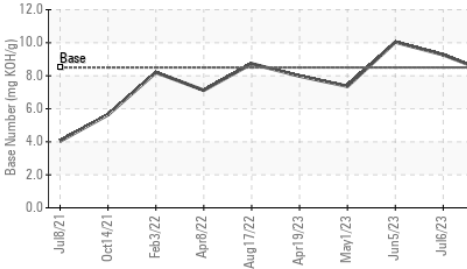
**Fuel Dilution**



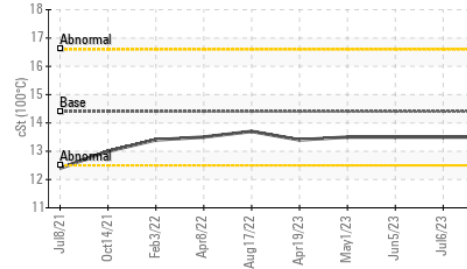
**Acid Number**



**Base Number**



**Viscosity @ 100°C**

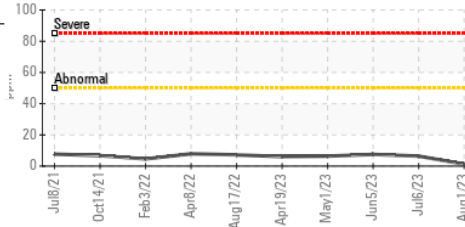


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

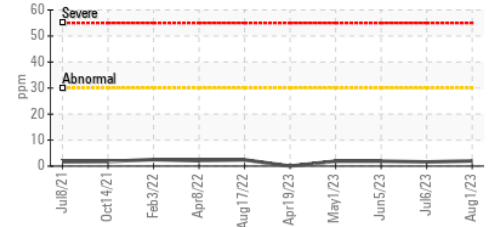
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.5

**GRAPHS**

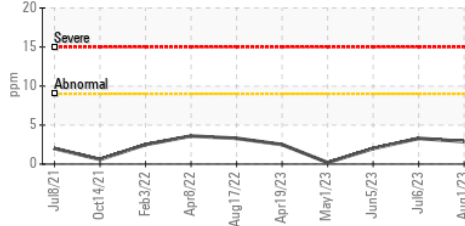
**Iron (ppm)**



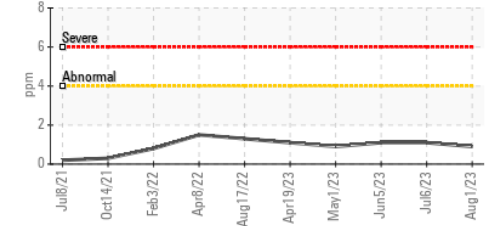
**Lead (ppm)**



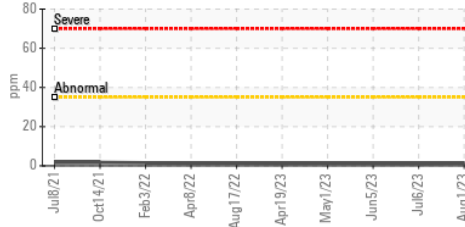
**Aluminum (ppm)**



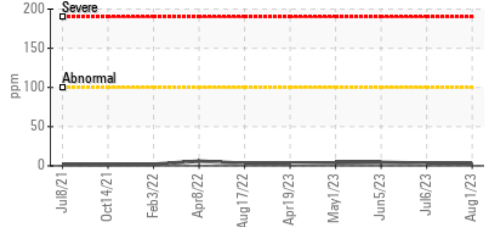
**Chromium (ppm)**



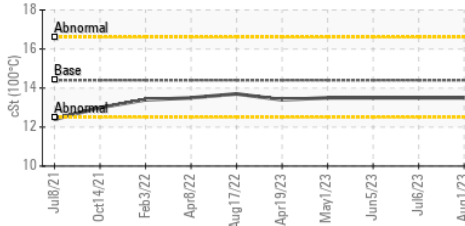
**Copper (ppm)**



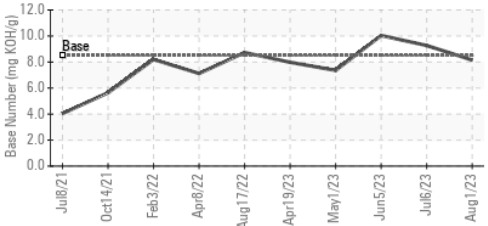
**Silicon (ppm)**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0045787 **Received** : 08 Aug 2023  
**Lab Number** : 05918786 **Diagnosed** : 09 Aug 2023  
**Unique Number** : 10590700 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**Magellan Midstream LP - Ponca City**  
 3990 South Union Street  
 Ponca City, OK  
 US 74601  
 Contact: Jake Daniel  
 Jacob.Daniel@magellanlp.com

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)

T:  
F: