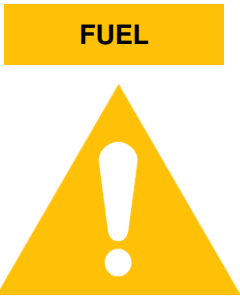
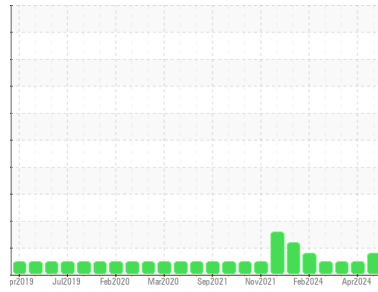


# OIL ANALYSIS REPORT



Machine Id  
**CATERPILLAR 980M L56**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (10 GAL)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

**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 condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0123727</b>	PCA0118478	PCA0118452
Sample Date	Client Info		<b>21 May 2024</b>	30 Apr 2024	25 Mar 2024
Machine Age	hrs	Client Info	<b>17212</b>	16917	16640
Oil Age	hrs	Client Info	<b>572</b>	500	294
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>MARGINAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	<b>6</b>	17	13
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	5	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
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>2</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>52</b>	63	53
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>865</b>	1079	912
Calcium	ppm	ASTM D5185m		<b>920</b>	1100	955
Phosphorus	ppm	ASTM D5185m		<b>952</b>	1140	896
Zinc	ppm	ASTM D5185m		<b>1122</b>	1338	1138
Sulfur	ppm	ASTM D5185m		<b>2915</b>	3784	3305

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	4
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Fuel	%	ASTM D3524	>5	<b>▲ 3.6</b>	<1.0	<1.0

## INFRA-RED

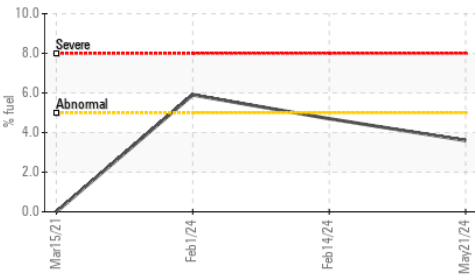
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	7.2	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	19.2	18.8

## FLUID DEGRADATION

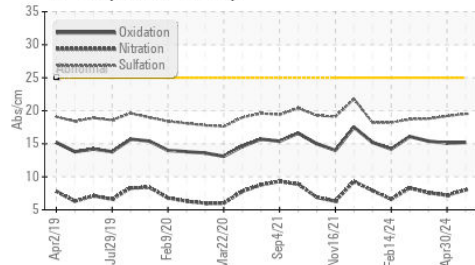
	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.2</b>	15.1	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.20</b>	9.0	13.92

# OIL ANALYSIS REPORT

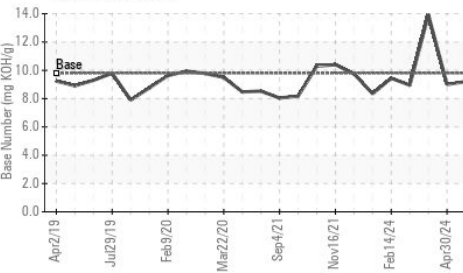
### Fuel Dilution



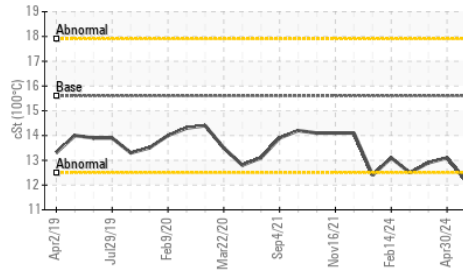
### FT-IR (Direct Trend)



### Base Number



### Viscosity @ 100°C

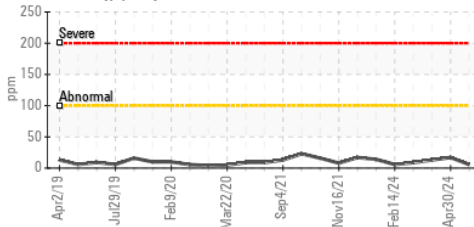


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

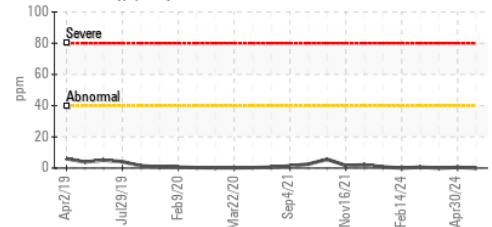
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.6	12.2	13.1	12.9

### GRAPHS

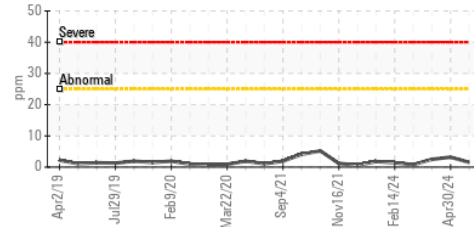
#### Iron (ppm)



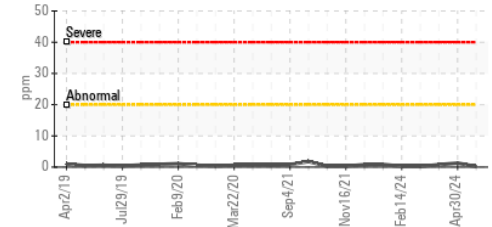
#### Lead (ppm)



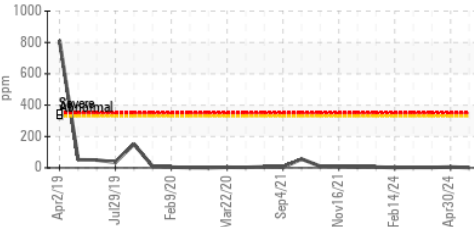
#### Aluminum (ppm)



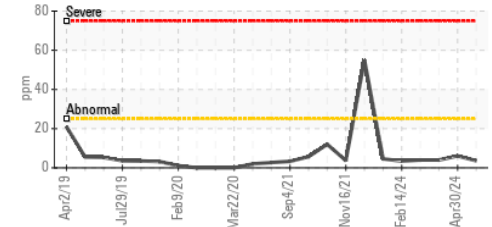
#### Chromium (ppm)



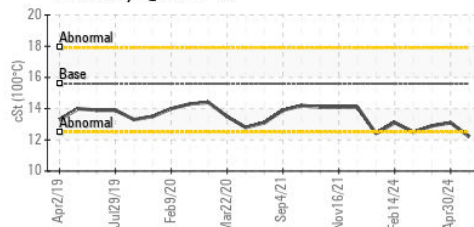
#### Copper (ppm)



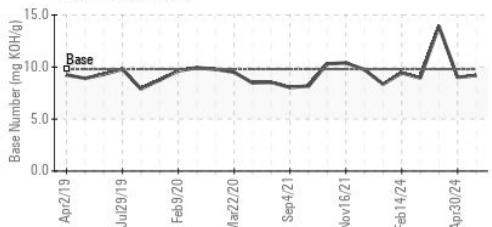
#### Silicon (ppm)



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : PCA0123727

**Lab Number** : 06197895

**Unique Number** : 11060018

**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

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)

**Received** : 03 Jun 2024

**Tested** : 06 Jun 2024

**Diagnosed** : 06 Jun 2024 - Wes Davis

**SCRAP METAL SERVICES (SMS Mill Services LLC)**

1500 COMMERCIAL AVE

MINGO JUNCTION, OH

US 43938

Contact: FRANK NALLY

fnally@scrapmetalservices.com

T:

F: