



Area  
[66779]  
Machine Id  
OHT045  
Component  
Diesel Engine  
Fluid  
PETRO CANADA DURON SHP 15W40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample  
Comment: PM-3 changed filters and fluid )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0126293</b>	PCA0062055	PCA0037522
Sample Date		Client Info		<b>26 Jun 2024</b>	18 Jan 2023	14 Apr 2022
Machine Age	hrs	Client Info		<b>3951</b>	3426	2905
Oil Age	hrs	Client Info		<b>3951</b>	3426	2905
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>78</b>	52	59
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>3</b>	2	2
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	0	2
Lead	ppm	ASTM D5185m	>40	<b>8</b>	6	4
Copper	ppm	ASTM D5185m	>330	<b>9</b>	7	13
Tin	ppm	ASTM D5185m	>15	<b>2</b>	1	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

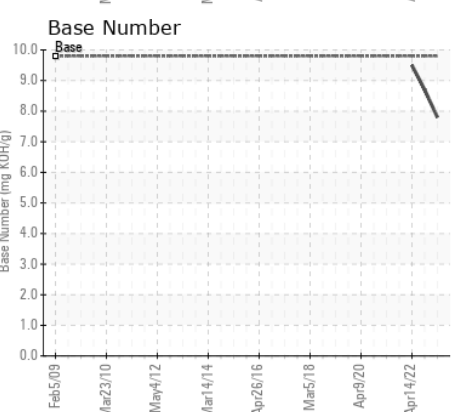
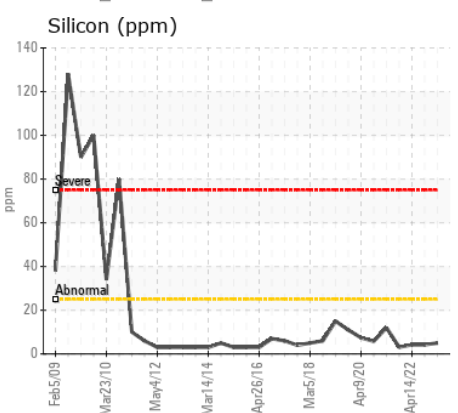
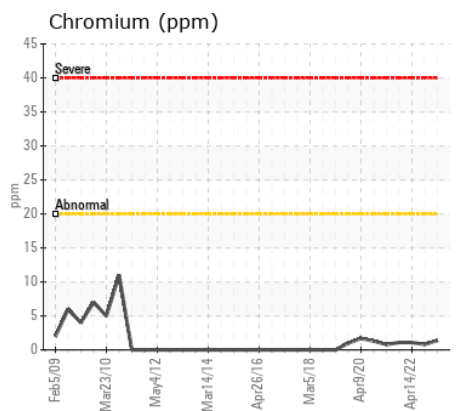
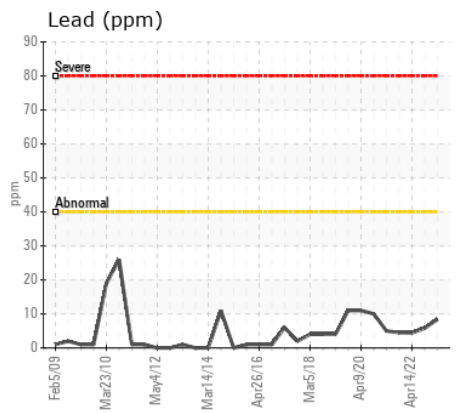
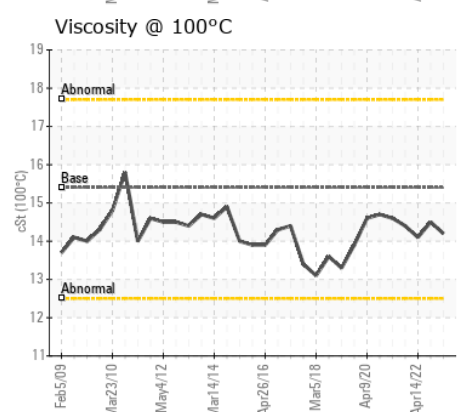
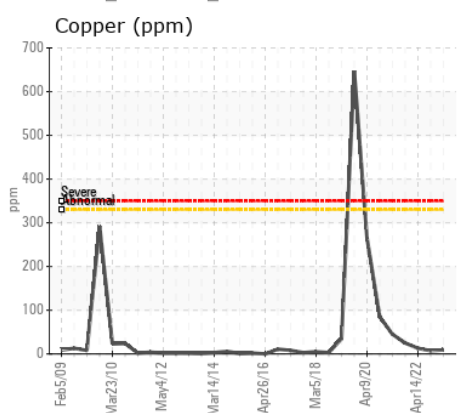
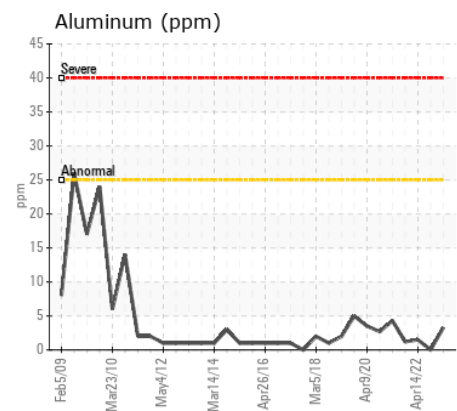
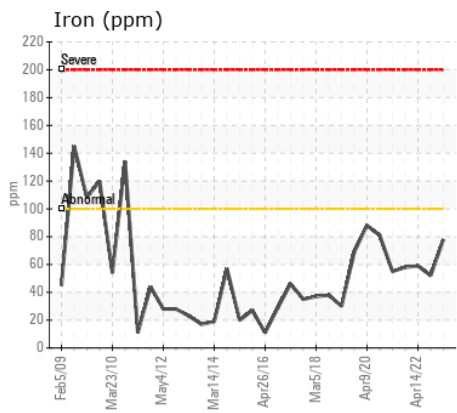
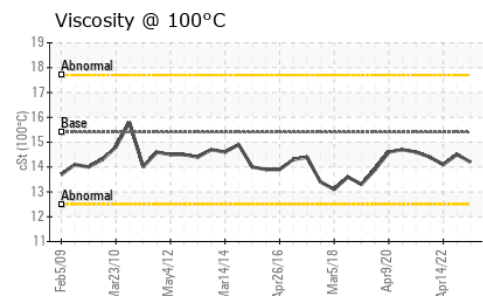
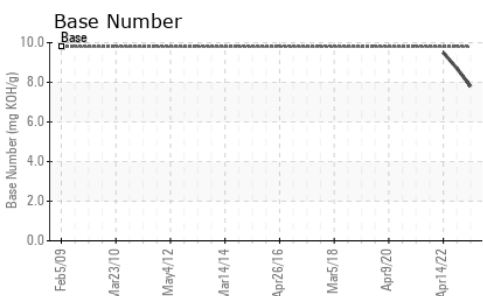
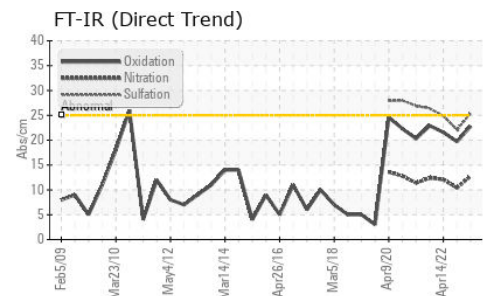
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>2.3</b>	1.2	1.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.8</b>	10.4	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.4</b>	22.1	24.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**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.

Sodium	ppm	ASTM D5185m		<b>1</b>	2	2
Boron	ppm	ASTM D5185m	0	<b>1</b>	0	3
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>72</b>	66	67
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>927</b>	907	1011
Calcium	ppm	ASTM D5185m	1070	<b>1097</b>	1082	1219
Phosphorus	ppm	ASTM D5185m	1150	<b>966</b>	1023	1164
Zinc	ppm	ASTM D5185m	1270	<b>1212</b>	1240	1451
Sulfur	ppm	ASTM D5185m	2060	<b>2637</b>	2846	3022
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.8</b>	19.7	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.8</b>	8.7	9.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.2</b>	14.5	14.1



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0126293 **Received** : 02 Jul 2024  
**Lab Number** : 06225781 **Tested** : 03 Jul 2024  
**Unique Number** : 11109274 **Diagnosed** : 03 Jul 2024 - Don Baldridge  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Kemp Quarries - Kemp Stone - Neosho**  
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 Neosho, MO  
 US 64850  
 Contact: NEOSHO NOTIFICATIONS  
 neosho@kempstone.com

Certificate L2367  
 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)