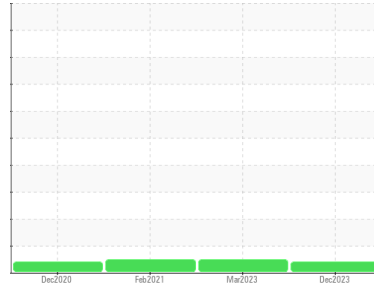


# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**183834**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- QTS)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. No other contaminants were detected in the oil.

### Fluid Condition

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0057401</b>	PCA0057275	PCA0020857
Sample Date	Client Info			<b>11 Dec 2023</b>	07 Mar 2023	26 Feb 2021
Machine Age	mls	Client Info		<b>451060</b>	400519	252216
Oil Age	mls	Client Info		<b>13000</b>	22200	20500
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</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>4</b>	7	8
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

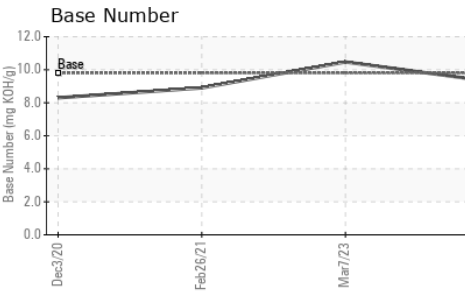
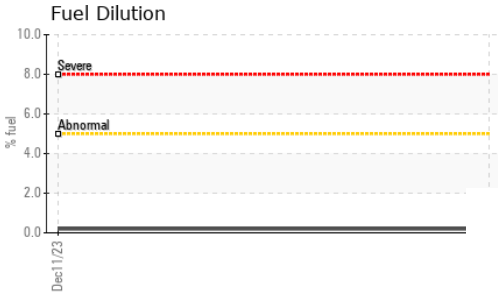
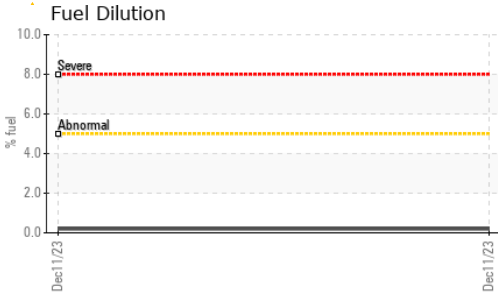
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>1</b>	10	4
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	50	61
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>898</b>	966	1119
Calcium	ppm	ASTM D5185m	1070	<b>1014</b>	1182	1196
Phosphorus	ppm	ASTM D5185m	1150	<b>1007</b>	1041	1188
Zinc	ppm	ASTM D5185m	1270	<b>1194</b>	1265	1211
Sulfur	ppm	ASTM D5185m	2060	<b>2940</b>	4029	2686

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>13</b>	8	8
Sodium	ppm	ASTM D5185m		<b>2</b>	1	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	10
Fuel	%	ASTM D3524	>5	<b>0.2</b>	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	6.8	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	18.3	21.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.7</b>	13.6	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.30</b>	10.47	8.9

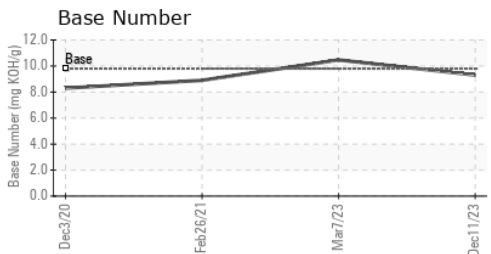
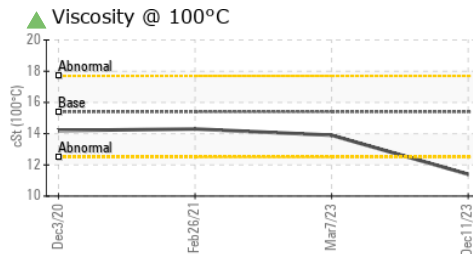
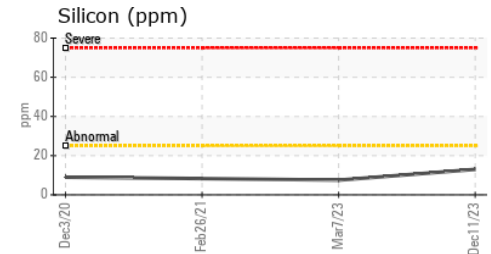
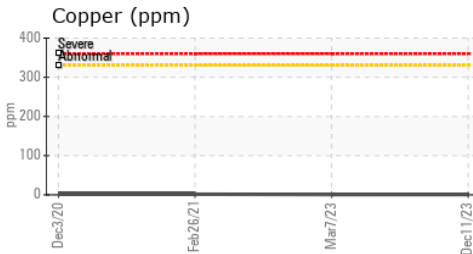
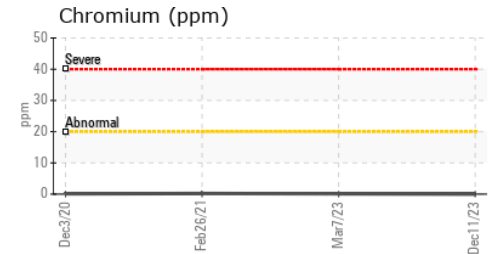
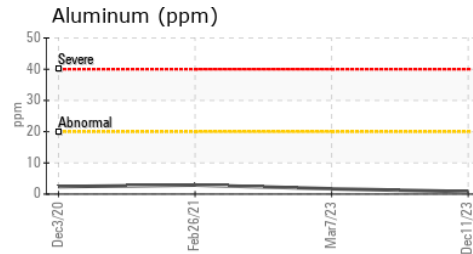
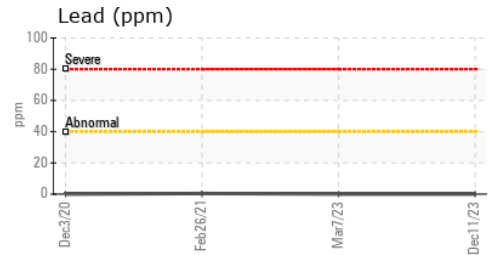
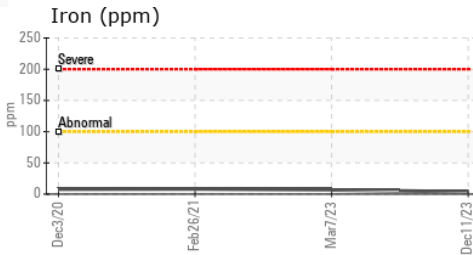
# OIL ANALYSIS REPORT



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	15.4 ▲ 11.4	13.9	14.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0057401 **Recieved** : 21 Dec 2023  
**Lab Number** : 06042709 **Diagnosed** : 29 Dec 2023  
**Unique Number** : 10803317 **Diagnostician** : Doug Bogart  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**VALLEY PACIFIC PETROLEUM SERVICES**  
 152 FRANK WEST CIRCLE  
 STOCKTON, CA  
 US 95206  
 Contact: MARCEY LIGHTFOOT  
 marcey.lightfoot@vpps.net  
 T: (209)461-3611  
 F: (209)888-6196

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)