

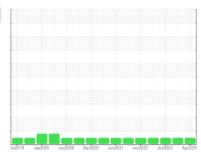
OIL ANALYSIS REPORT

G.LOPES CONSTRUCTION INC./On-Road

328

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)



Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

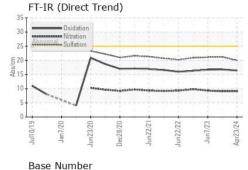
Fluid Condition

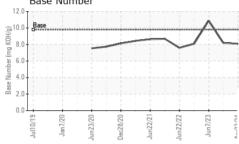
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

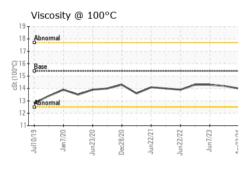
SAMPLE INFORMATION method limit/base current history1 history2	AAL)		JUI2015 Jan	12020 30112020 06:202	eu Junzozi Junzozz Junzo.	ES ADIEUZI	
Sample Date	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 312000 292000 272000 Oil Age mls Client Info 204000 212000 232000 Oil Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history2 history2 Iron ppm ASTM D5185m >65 24 25 23 23 Chromium ppm ASTM D5185m >55 22 2 <td< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PCA0122636</th><th>PCA0083391</th><th>PCA0098532</th></td<>	Sample Number		Client Info		PCA0122636	PCA0083391	PCA0098532
Oil Age mls Client Info 204000 212000 232000 Oil Changed Client Info N/A N/A N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Fuel WC Method 3-0 <1.0	Sample Date		Client Info		23 Apr 2024	15 Nov 2023	07 Jun 2023
Oil Changed Status Client Info N/A NAMAL NORMAL NEG 1.0 <1.0	Machine Age	mls	Client Info		-	292000	272000
Oil Changed Sample Status Client Info N/A N/A N/A N/A N/A N/A N/A N/A N/A Sample Status NORMAL NEG NEG 1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 NEG	Oil Age	mls	Client Info		204000	212000	232000
NORMAL NORMAL NORMAL	-		Client Info		N/A	N/A	N/A
Fuel					NORMAL	NORMAL	NORMAL
Water Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >65 24 25 23 Chromium ppm ASTM D5185m >5 2 2 2 2 Nickel ppm ASTM D5185m >5 <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Second WC Method NEG NEG NEG	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 2 2 2 2 Nickel ppm ASTM D5185m >3 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>65	24	25	23
Titanium ppm ASTM D5185m >5 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Chromium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>5</td> <th>2</th> <td>2</td> <td>2</td>	Chromium	ppm	ASTM D5185m	>5	2	2	2
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >35 13 10 9 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >180 4 5 5 Tin ppm ASTM D5185m >8 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 <1 0 <1 Cadmium ppm ASTM D5185m 0 <1 2 <1 Boron ppm ASTM D5185m 0 <1 2 <1 0 Barium ppm ASTM D5185m 0 <1 <1 0 <1 <1 0 Molydenum ppm ASTM D5185m 0 <1 <1 <1 <1 <1 <1 <1 <	Nickel	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	Titanium	ppm	ASTM D5185m	>5	<1	<1	<1
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >180 4 5 5 Tin ppm ASTM D5185m >8 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 <1 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 <1 1 0 ADJUSTIVES method limit/base current history1 histor	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >180 4 5 5 Tin ppm ASTM D5185m >8 0 0 <1	Aluminum	ppm	ASTM D5185m	>35	13	10	9
Tin ppm ASTM D5185m >8 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 <1 Barium ppm ASTM D5185m 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 62 78 62 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1070 1164 1318 1188 Phosphorus ppm ASTM D5185m 1150 1056 1229 1058 Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 <th< td=""><td>Lead</td><td>ppm</td><td>ASTM D5185m</td><td>>10</td><th>0</th><td>0</td><td>0</td></th<>	Lead	ppm	ASTM D5185m	>10	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 <1 Barium ppm ASTM D5185m 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 <1 <1 <1 Mangaese ppm ASTM D5185m 0 <1 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 1070 1164 1318 1188 Phosphorus ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060<	Copper	ppm	ASTM D5185m	>180	4	5	5
Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>8	0	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	<1	0
Barium ppm ASTM D5185m 0 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 62 78 62 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	<1	2	<1
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 1004 1203 1038 Calcium ppm ASTM D5185m 1070 1164 1318 1188 Phosphorus ppm ASTM D5185m 1150 1056 1229 1058 Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >20 1 5 <1	Barium	ppm	ASTM D5185m	0	0	<1	0
Magnesium ppm ASTM D5185m 1010 1004 1203 1038 Calcium ppm ASTM D5185m 1070 1164 1318 1188 Phosphorus ppm ASTM D5185m 1150 1056 1229 1058 Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m 3 2 2 2 Potassium ppm ASTM D5185m >20 1 5 <1 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3 0.6 0.8 0.7 Nitration Abs/:mm *ASTM D7415 >30 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>60</td> <th>62</th> <td>78</td> <td>62</td>	Molybdenum	ppm	ASTM D5185m	60	62	78	62
Calcium ppm ASTM D5185m 1070 1164 1318 1188 Phosphorus ppm ASTM D5185m 1150 1056 1229 1058 Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >20 1 5 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 1150 1056 1229 1058 Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >20 1 5 <1	Magnesium	ppm	ASTM D5185m	1010	1004	1203	1038
Zinc ppm ASTM D5185m 1270 1274 1571 1306 Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >20 1 5 <1	Calcium	ppm	ASTM D5185m	1070	1164	1318	1188
Sulfur ppm ASTM D5185m 2060 3387 3817 3473 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m >20 3 2 2 Potassium ppm ASTM D5185m >20 1 5 <1	Phosphorus	ppm	ASTM D5185m	1150	1056	1229	1058
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 1 5 <1	Zinc	ppm	ASTM D5185m	1270	1274	1571	1306
Silicon ppm ASTM D5185m >15 4 6 3 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 1 5 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.8 0.7 Nitration Abs/cm *ASTM D7624 >20 9.1 9.1 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Sulfur	ppm	ASTM D5185m	2060	3387	3817	3473
Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 1 5 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.8 0.7 Nitration Abs/cm *ASTM D7624 >20 9.1 9.1 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 5 <1	Silicon	ppm	ASTM D5185m	>15	4	6	3
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.8 0.7 Nitration Abs/cm *ASTM D7624 >20 9.1 9.1 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Sodium	ppm	ASTM D5185m		3	2	2
Soot % % *ASTM D7844 >3 0.6 0.8 0.7 Nitration Abs/cm *ASTM D7624 >20 9.1 9.1 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Potassium	ppm	ASTM D5185m	>20	1	5	<1
Nitration Abs/cm *ASTM D7624 >20 9.1 9.1 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.0 21.2 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Soot %	%	*ASTM D7844	>3	0.6	0.8	0.7
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.1	9.3
Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.8 16.7	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	21.2	21.1
	FLUID DEGRA	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.08 8.20 10.89	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	16.8	16.7
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.08	8.20	10.89



OIL ANALYSIS REPORT





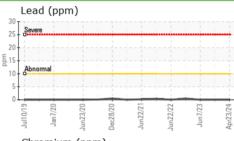


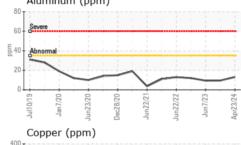
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

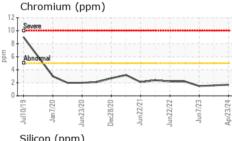
FLUID PROP	ERHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	14.2	14.3

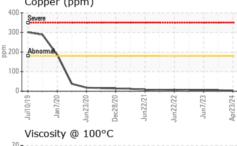
150 - Severe							
100							
Abno	mai			+	4		-
50							
0							
6	20.	20	20	21.	22	23	24
Jul10/	Jan 7/2(Jun23/)ec28/20	Jun22/	Jun22/	/Lun/	Apr23/24
=	9	듬	80	5	듬	3	9.

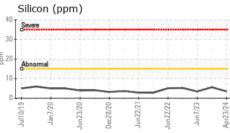
GRAPHS

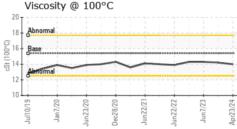


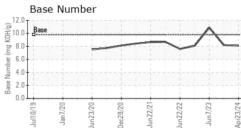
















Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06161703

: PCA0122636 Unique Number : 10997126

Received : 26 Apr 2024 **Tested** : 28 Apr 2024

Diagnosed : 28 Apr 2024 - Wes Davis

Test Package : MOB 2 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)

G LOPES CONSTRUCTION

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F: