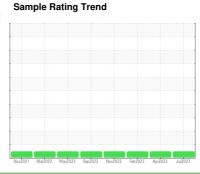


OIL ANALYSIS REPORT

N.E.R./On-Road **350**

Component **Diesel Engine**

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





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

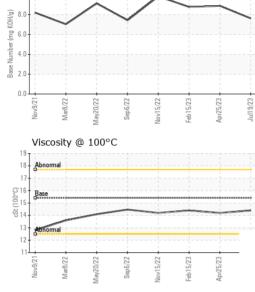
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0098428	PCA0083226	PCA0083132
Sample Date		Client Info		19 Jul 2023	25 Apr 2023	15 Feb 2023
Machine Age	hrs	Client Info		172000	152000	132000
Oil Age	hrs	Client Info		172000	152000	132000
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	21	26	28
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	5
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	8	9	12
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	0	<1
Barium	ppm	ASTM D5185m	0	2	0	0
Molybdenum	ppm	ASTM D5185m	60	67	63	62
Managaga						4
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Manganese Magnesium		ASTM D5185m ASTM D5185m	1010	<1 991	<1 934	<1 925
J J	ppm					
Magnesium	ppm	ASTM D5185m	1010	991	934	925
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	1010 1070	991 1189	934 1089	925 1148
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150	991 1189 1067	934 1089 1000	925 1148 919
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270	991 1189 1067 1324	934 1089 1000 1254	925 1148 919 1168
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060	991 1189 1067 1324 3011	934 1089 1000 1254 2772	925 1148 919 1168 2844
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270 2060 limit/base	991 1189 1067 1324 3011	934 1089 1000 1254 2772 history1	925 1148 919 1168 2844 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25	991 1189 1067 1324 3011 current	934 1089 1000 1254 2772 history1	925 1148 919 1168 2844 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25	991 1189 1067 1324 3011 current 5	934 1089 1000 1254 2772 history1 4	925 1148 919 1168 2844 history2 5
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20	991 1189 1067 1324 3011 current 5 0	934 1089 1000 1254 2772 history1 4 2	925 1148 919 1168 2844 history2 5 2 6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3	991 1189 1067 1324 3011 current 5 0 4	934 1089 1000 1254 2772 history1 4 2 6	925 1148 919 1168 2844 history2 5 2 6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	991 1189 1067 1324 3011 current 5 0 4 current	934 1089 1000 1254 2772 history1 4 2 6 history1	925 1148 919 1168 2844 history2 5 2 6 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	991 1189 1067 1324 3011 current 5 0 4 current 0.7 10.3	934 1089 1000 1254 2772 history1 4 2 6 history1 0.7 10.1	925 1148 919 1168 2844 history2 5 2 6 history2 0.4 8.6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	991 1189 1067 1324 3011	934 1089 1000 1254 2772 history1 4 2 6 history1 0.7 10.1 20.8	925 1148 919 1168 2844 history2 5 2 6 history2 0.4 8.6 19.5
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	991 1189 1067 1324 3011 current 5 0 4 current 0.7 10.3 22.5 current	934 1089 1000 1254 2772 history1 4 2 6 history1 0.7 10.1 20.8 history1	925 1148 919 1168 2844 history2 5 2 6 history2 0.4 8.6 19.5



Base Number

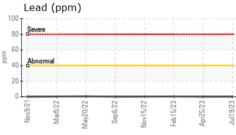
OIL ANALYSIS REPORT

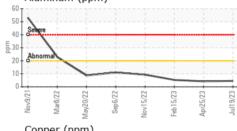


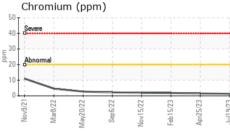
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

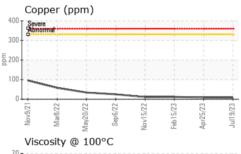
Visc @ 100°C cSt	ASTM D445	15.4	14.4	14.2	14.4

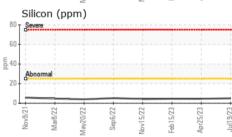
/23
Feb 15/23 Apr25/23 Jul19/23

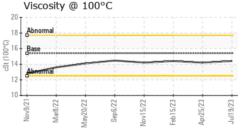


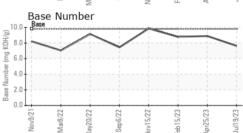














Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05904523

: PCA0098428 : 10565879

Received : 21 Jul 2023 : 24 Jul 2023 Diagnosed Diagnostician : Wes Davis

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

565 WINTHROP ST TAUNTON, MA US 02780

Contact: BUTCH MCGRATH

bmcgrath@glopes.com

T: F:

Submitted By: MATT MANOLI