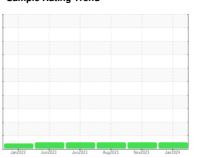


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
413049
Component
Diesel Engine
Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

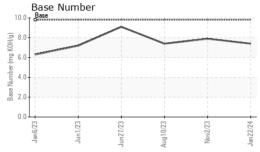
Fluid Condition

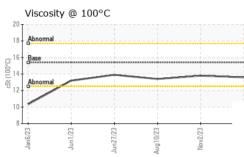
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0078640	GFL0078619	GFL0082047
Sample Date		Client Info		22 Jan 2024	02 Nov 2023	10 Aug 2023
Machine Age	hrs	Client Info		3503	2903	2308
Oil Age	hrs	Client Info		600	0	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
	ION				<1.0	<1.0
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	9	10	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	1	<1	2
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	7
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m		1	4	11
Tin	ppm	ASTM D5185m		<1	<1	1
Vanadium	ppm	ASTM D5185m	7.0	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
		AO HVI DO TOOTH		U		0
	1-1-					
ADDITIVES	'''	method	limit/base	current	history1	history2
	ppm	ASTM D5185m	limit/base	current 4	history1	5
ADDITIVES		ASTM D5185m				
ADDITIVES Boron	ppm	ASTM D5185m	0	4	2	5
ADDITIVES Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	4 0	2	5 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	4 0 61	2 0 64	5 0 82
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	4 0 61 <1	2 0 64 0	5 0 82 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	4 0 61 <1 1000	2 0 64 0 949	5 0 82 <1 1189
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	4 0 61 <1 1000 1098	2 0 64 0 949 1093	5 0 82 <1 1189 1354
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	4 0 61 <1 1000 1098 1063	2 0 64 0 949 1093 935	5 0 82 <1 1189 1354 1307
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	4 0 61 <1 1000 1098 1063 1271	2 0 64 0 949 1093 935 1253	5 0 82 <1 1189 1354 1307 1517
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	4 0 61 <1 1000 1098 1063 1271 3065	2 0 64 0 949 1093 935 1253 3056	5 0 82 <1 1189 1354 1307 1517 3628
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	4 0 61 <1 1000 1098 1063 1271 3065	2 0 64 0 949 1093 935 1253 3056 history1	5 0 82 <1 1189 1354 1307 1517 3628
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	4 0 61 <1 1000 1098 1063 1271 3065 current	2 0 64 0 949 1093 935 1253 3056 history1	5 0 82 <1 1189 1354 1307 1517 3628 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	4 0 61 <1 1000 1098 1063 1271 3065 current 4	2 0 64 0 949 1093 935 1253 3056 history1 4	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8 history1	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m Method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4 current 0.4 8.8	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8 history1 0.4 8.3	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19 history2 0.4 8.0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4 current 0.4 8.8 20.0	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8 history1 0.4 8.3 20.3	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19 history2 0.4 8.0 19.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4 current 0.4 8.8 20.0	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8 history1 0.4 8.3 20.3	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19 history2 0.4 8.0 19.4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	4 0 61 <1 1000 1098 1063 1271 3065 current 4 3 4 current 0.4 8.8 20.0	2 0 64 0 949 1093 935 1253 3056 history1 4 2 8 history1 0.4 8.3 20.3	5 0 82 <1 1189 1354 1307 1517 3628 history2 6 5 19 history2 0.4 8.0 19.4



OIL ANALYSIS REPORT

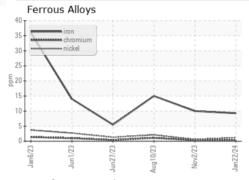


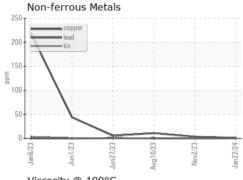


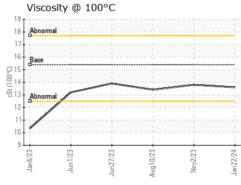
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

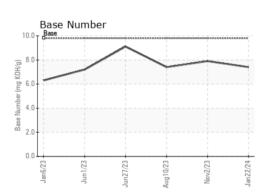
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.8	13.4

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10848182 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0078640 : 06071505

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Recieved

: 26 Jan 2024 Diagnosed Diagnostician : Wes Davis

: 27 Jan 2024

GFL Environmental - 152 - Jacksonville 7580 PHILIPS HWY

Jacksonville, FL US 32256 Contact: Chris Smith

chris.smith@gflenv.com T: (904)252-0013

* - 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)

Report Id: GFL152 [WUSCAR] 06071505 (Generated: 01/27/2024 06:00:59) Rev: 1

Submitted By: Eric Thomas