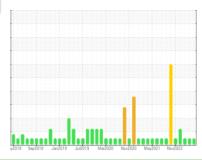


OIL ANALYSIS REPORT

(PX342R) TALLASSEE 10456

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (13 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

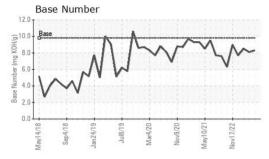
Fluid Condition

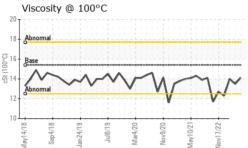
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0079725	GFL0071666	GFL0086023
Sample Date		Client Info		23 Jan 2024	13 Nov 2023	22 Aug 2023
Machine Age	hrs	Client Info		11604	0	12437
Oil Age	hrs	Client Info		11604	0	12437
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	>3.0	<1.0	<1.0	<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	>75	19	46	3
Chromium	ppm	ASTM D5185m	>5	<1	2	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		2	5	0
Lead	ppm		>25	- <1	<1	<1
Copper	ppm	ASTM D5185m		<1	2	0
Tin	ppm		>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 7	history1	history2
	ppm		0			
Boron	ppm	ASTM D5185m	0	7	9	46
Boron Barium		ASTM D5185m ASTM D5185m ASTM D5185m	0	7 0	9	46 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	7 0 62	9 0 65	46 0 60
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	7 0 62 <1	9 0 65 <1	46 0 60 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	7 0 62 <1 972	9 0 65 <1 984	46 0 60 0 973
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	7 0 62 <1 972 1029 1065	9 0 65 <1 984 1126	46 0 60 0 973 1215
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	7 0 62 <1 972 1029	9 0 65 <1 984 1126 899	46 0 60 0 973 1215 975
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	7 0 62 <1 972 1029 1065 1305	9 0 65 <1 984 1126 899 1275	46 0 60 0 973 1215 975 1250
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	7 0 62 <1 972 1029 1065 1305 3165	9 0 65 <1 984 1126 899 1275 3076	46 0 60 0 973 1215 975 1250 3736
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	7 0 62 <1 972 1029 1065 1305 3165	9 0 65 <1 984 1126 899 1275 3076 history1	46 0 60 0 973 1215 975 1250 3736 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	7 0 62 <1 972 1029 1065 1305 3165 current	9 0 65 <1 984 1126 899 1275 3076 history1	46 0 60 0 973 1215 975 1250 3736 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	7 0 62 <1 972 1029 1065 1305 3165 current 4	9 0 65 <1 984 1126 899 1275 3076 history1 8 3	46 0 60 0 973 1215 975 1250 3736 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	7 0 62 <1 972 1029 1065 1305 3165 current 4 3	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1	46 0 60 0 973 1215 975 1250 3736 history2 5 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	7 0 62 <1 972 1029 1065 1305 3165 current 4 3 3 current	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1 history1 1.4	46 0 60 0 973 1215 975 1250 3736 history2 5 1 2 history2 0.2
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	7 0 62 <1 972 1029 1065 1305 3165 current 4 3 3	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1	46 0 60 0 973 1215 975 1250 3736 history2 5 1 2
Boron Barium Molybdenum Manganese 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 Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	7 0 62 <1 972 1029 1065 1305 3165 current 4 3 3 current 0.6 8.9	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1 history1 1.4 11.0	46 0 60 0 973 1215 975 1250 3736 history2 5 1 2 history2 0.2 5.7
Boron Barium Molybdenum Manganese 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 Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30	7 0 62 <1 972 1029 1065 1305 3165 current 4 3 3 current 0.6 8.9 20.2	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1 history1 1.4 11.0 22.6	46 0 60 0 973 1215 975 1250 3736 history2 5 1 2 history2 0.2 5.7 17.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30 limit/base	7 0 62 <1 972 1029 1065 1305 3165 current 4 3 3 current 0.6 8.9 20.2 current	9 0 65 <1 984 1126 899 1275 3076 history1 8 3 <1 history1 1.4 11.0 22.6 history1	46 0 60 0 973 1215 975 1250 3736 history2 5 1 2 history2 0.2 5.7 17.9 history2



OIL ANALYSIS REPORT

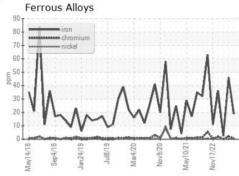


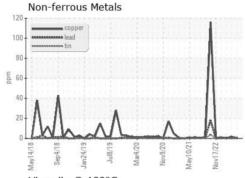


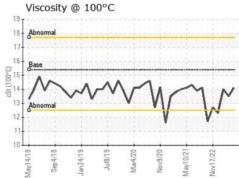
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

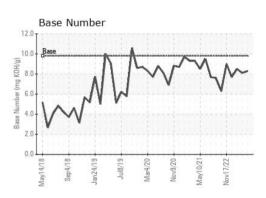
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	13.5	14.0

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0079725 : 06079012 : 10861103

Recieved Diagnosed

: 02 Feb 2024 : 05 Feb 2024 Diagnostician : Wes Davis

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee

Multiple Sites Montgomery, AL US 36108

Contact: BRANDON HURST

brandonhurst@gflenv.com T:

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)

F: