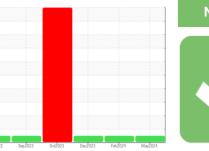


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id

820038-253

Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- LTR)

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.

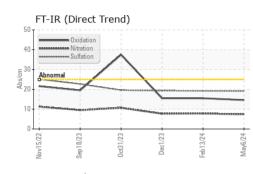
Fluid Condition

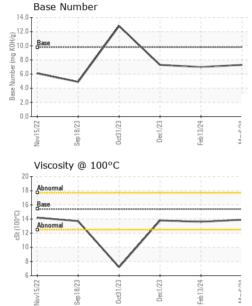
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0120577	GFL0108497	GFL0103370
Sample Date		Client Info		06 May 2024	13 Feb 2024	01 Dec 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
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	>6.0	<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	>100	10	8	11
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	2	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base 0		-	-
ADDITIVES		method ASTM D5185m		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 0	history1 9	history2 4
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 0 0	history1 9 0	history2 4 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 0 0 57	history1 9 0 61	history2 4 0 56
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	ourrent 0 0 57 <1	history1 9 0 61 0	history2 4 0 56 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 0 0 57 <1 973	history1 9 0 61 0 1023	history2 4 0 56 <1 941
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current 0 0 57 <1 973 1176	history1 9 0 61 0 1023 1147	history2 4 0 56 <1 941 1057
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	Current 0 57 <1 973 1176 987	history1 9 0 61 0 1023 1147 1057	history2 4 0 56 <1 941 1057 894
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current 0 0 57 <1 973 1176 987 1190	history1 9 0 61 0 1023 1147 1057 1303	history2 4 0 56 <1 941 1057 894 1180
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 0 57 <1 973 1176 987 1190 3263	history1 9 0 61 0 1023 1147 1057 1303 2971	history2 4 0 56 <1 941 1057 894 1180 2967
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 imit/base	Current 0 57 <1 973 1176 987 1190 3263 Current	history1 9 0 61 0 1023 1147 1057 1303 2971 history1	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 imit/base	current 0 0 57 <1 973 1176 987 1190 3263 current 5	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 imit/base	current 0 0 57 <1 973 1176 987 1190 3263 current 5 4	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20	current 0 0 57 <1 973 1176 987 1190 3263 current 5 4 0	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3 0	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4 2
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 ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20 limit/base >3	Current 0 57 <1 973 1176 987 1190 3263 current 5 4 0 current	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3 0 history1	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4 2 history2
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	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20 limit/base >3	current 0 0 57 <1 973 1176 987 1190 3263 current 5 4 0 current 0.3	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3 0 history1 0.3	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4 2 history2 0 0 0 0 1180 2967 history2 0 0 0 0 0.5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>Imit/base</i> >25 >20 <i>Imit/base</i> >3 >20	current 0 0 57 <1 973 1176 987 1190 3263 current 5 4 0 current 0.3 7.4	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3 0 history1 0 7.8	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4 2 history2 0 5 4 2 0.5 7.7
ADDITIVES 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 TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >3 >20 >30	Current 0 0 57 <1 973 1176 987 1190 3263 current 5 4 0 current 0.3 7.4 19.1	history1 9 0 61 0 1023 1147 1057 1303 2971 history1 4 3 0 history1 0.3 7.8 19.2	history2 4 0 56 <1 941 1057 894 1180 2967 history2 5 4 2 history2 0.5 7.7 19.3

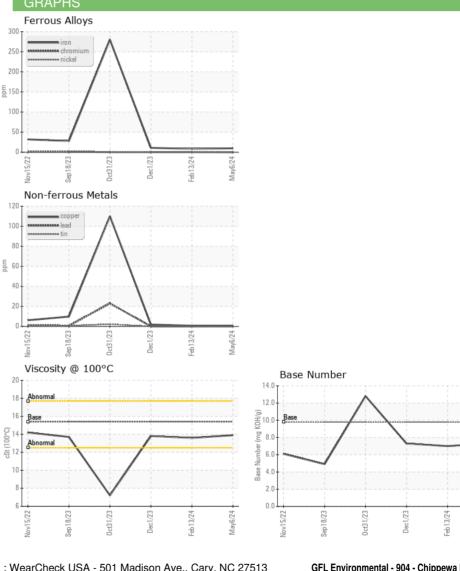


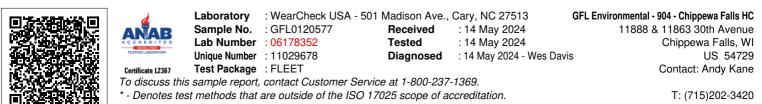
OIL ANALYSIS REPORT





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	13.9	13.6	13.8
GRAPHS						





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F:

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Submitted By: See also GFL904,A,B,C, 927, 938 - Andy Kane

May6/24