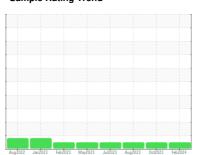


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 912016 Component Diesel Engine Fluid PETRO CANAL

PETRO CANADA DURON SHP 15W40 (9 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

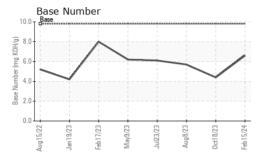
Fluid Condition

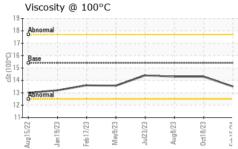
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0106710	GFL0097704	GFL0087324
Sample Date		Client Info		15 Feb 2024	18 Oct 2023	08 Aug 2023
Machine Age	hrs	Client Info		5779	5427	4867
Oil Age	hrs	Client Info		352	560	700
Oil Changed		Client Info		Not Changd	Changed	Changed
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	>120	20	54	36
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	4	2	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	<1	3	2
Copper	ppm	ASTM D5185m	>330	19	5	5
Tin	ppm	ASTM D5185m	>15	1	1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 6	history1	history2
	ppm		0			
Boron		ASTM D5185m	0	6	2	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	6 2	2 5	2
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	6 2 89	2 5 66	2 0 61
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	6 2 89 2	2 5 66 <1	2 0 61 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	6 2 89 2 1334	2 5 66 <1 955	2 0 61 1 989
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	6 2 89 2 1334 1496	2 5 66 <1 955 1168	2 0 61 1 989 1185
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	6 2 89 2 1334 1496 1430	2 5 66 <1 955 1168 1076	2 0 61 1 989 1185 1018
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	6 2 89 2 1334 1496 1430	2 5 66 <1 955 1168 1076 1285	2 0 61 1 989 1185 1018 1309
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 2 89 2 1334 1496 1430 1851 4994	2 5 66 <1 955 1168 1076 1285 2333	2 0 61 1 989 1185 1018 1309 2959
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	6 2 89 2 1334 1496 1430 1851 4994	2 5 66 <1 955 1168 1076 1285 2333 history1	2 0 61 1 989 1185 1018 1309 2959
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	6 2 89 2 1334 1496 1430 1851 4994 current	2 5 66 < 1 955 1168 1076 1285 2333 history1 6	2 0 61 1 989 1185 1018 1309 2959 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	6 2 89 2 1334 1496 1430 1851 4994 current 8 5	2	2 0 61 1 989 1185 1018 1309 2959 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	6 2 89 2 1334 1496 1430 1851 4994 current 8 5	2 5 66 <1 955 1168 1076 1285 2333 history1 6 13 3	2 0 61 1 989 1185 1018 1309 2959 history2 5 12
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 >20 limit/base	6 2 89 2 1334 1496 1430 1851 4994 current 8 5 4 current	2 5 66 < 1 955 1168 1076 1285 2333 history1 6 13 3 history1	2 0 61 1 989 1185 1018 1309 2959 history2 5 12 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	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	6 2 89 2 1334 1496 1430 1851 4994 current 8 5 4 current	2 5 66 < 1 955 1168 1076 1285 2333 history1 6 13 3 history1 1.6	2 0 61 1 989 1185 1018 1309 2959 history2 5 12 3 history2
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 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	6 2 89 2 1334 1496 1430 1851 4994 current 8 5 4 current 0.3 8.3	2 5 66 < 1 955 1168 1076 1285 2333 history1 6 13 3 history1 1.6 11.8	2 0 61 1 989 1185 1018 1309 2959 history2 5 12 3 history2
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 D7415	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	6 2 89 2 1334 1496 1430 1851 4994 current 8 5 4 current 0.3 8.3 19.7	2 5 66 < 1 955 1168 1076 1285 2333 history1 6 13 3 history1 1.6 11.8 26.4	2 0 61 1 989 1185 1018 1309 2959 history2 5 12 3 history2 1.2 10.3 23.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7615 Method	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >30 limit/base >25	6 2 89 2 1334 1496 1430 1851 4994 current 8 5 4 current 0.3 8.3 19.7 current	2 5 66 < 1 955 1168 1076 1285 2333 history1 6 13 3 history1 1.6 11.8 26.4 history1	2 0 61 1 989 1185 1018 1309 2959 history2 5 12 3 history2 1.2 10.3 23.6 history2



OIL ANALYSIS REPORT

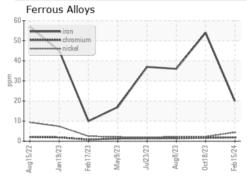


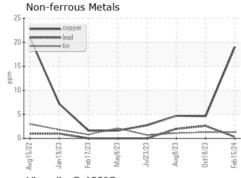


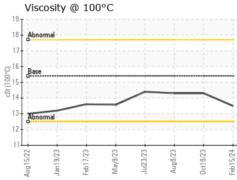
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

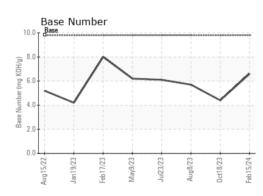
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	14.3	14.3

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06101479 Unique Number: 10899709

: GFL0106710 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 27 Feb 2024 **Tested**

: 28 Feb 2024 Diagnosed : 29 Feb 2024 - Jonathan Hester

GFL Environmental - 405 - Arbor Hills 7400 Napier Rd NORTHVILLE, MI

US 48168 Contact: John Nahal

jnahal@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: