

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (MW6806) Machine Id 3713

Component Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (7 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.

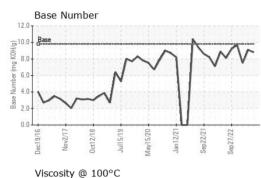


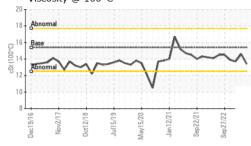


SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0075182	GFL0075173	GFL0052258
Sample Date		Client Info		05 Jan 2024	29 Sep 2023	08 May 2023
Machine Age	hrs	Client Info		18026	17600	16879
Oil Age	hrs	Client Info		18026	17600	16879
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ON	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	24	4	8
Chromium	ppm	ASTM D5185m	>5	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	4	2	0
Lead	ppm	ASTM D5185m	>25	5	0	0
Copper	ppm	ASTM D5185m	>100	2	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	0	0
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	3	6	11
				•	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	0 54	0 62	0 59
			60			
Molybdenum	ppm	ASTM D5185m	60	54	62	59
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	60 0	54 <1	62 <1	59 <1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	54 <1 864 1215 1084	62 <1 1060	59 <1 970
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	54 <1 864 1215	62 <1 1060 1135	59 <1 970 1089
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	54 <1 864 1215 1084	62 <1 1060 1135 1182	59 <1 970 1089 1058
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270	54 <1 864 1215 1084 1214	62 <1 1060 1135 1182 1464	59 <1 970 1089 1058 1305
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	60 0 1010 1070 1150 1270 2060 limit/base	54 <1 864 1215 1084 1214 3013	62 <1 1060 1135 1182 1464 3727	59 <1 970 1089 1058 1305 3758
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	54 <1 864 1215 1084 1214 3013 current	62 <1 1060 1135 1182 1464 3727 history1	59 <1 970 1089 1058 1305 3758 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25	54 <1 864 1215 1084 1214 3013 current 7	62 <1 1060 1135 1182 1464 3727 history1 13	59 <1 970 1089 1058 1305 3758 history2 6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25	54 <1 864 1215 1084 1214 3013 <u>current</u> 7 25	62 <1 1060 1135 1182 1464 3727 history1 13 1	59 <1 970 1089 1058 1305 3758 history2 6 0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25	54 <1 864 1215 1084 1214 3013 <u>current</u> 7 25 0	62 <1 1060 1135 1182 1464 3727 history1 13 1 3 1 <1	59 <1 970 1089 1058 1305 3758 history2 6 0 <1
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	54 <1 864 1215 1084 1214 3013 current 7 25 0 current	62 <1 1060 1135 1182 1464 3727 history1 13 1 <1 <1 history1	59 <1 970 1089 1058 1305 3758 history2 6 0 <1 history2
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 ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20	54 <1 864 1215 1084 1214 3013 <u>current</u> 7 25 0 <u>current</u> 0.2	62 <1 1060 1135 1182 1464 3727 history1 13 1 <1 <1 history1 0.1	59 <1 970 1089 1058 1305 3758 history2 6 0 <1 history2 0.3
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 ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20	54 <1 864 1215 1084 1214 3013 <u>current</u> 7 25 0 <u>current</u> 0.2 6.4	62 <1 1060 1135 1182 1464 3727 history1 13 1 3 1 <1 ×1 history1 0.1 4.5	59 <1 970 1089 1058 1305 3758 history2 6 0 <1 history2 0.3 7.5
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 ASTM D7844 *ASTM D7844	60 0 1010 1070 1150 2060 2060 2060 225 20 220 1000 220 20 20 20 20 20 20 20 20 20 20 20	54 <1 864 1215 1084 1214 3013 <u>current</u> 7 25 0 <u>current</u> 0.2 6.4 19.1	62 <1 1060 1135 1182 1464 3727 history1 13 1 <1 <1 (1) history1 0.1 4.5 16.7	59 <1 970 1089 1058 1305 3758 history2 6 0 <1 history2 0.3 7.5 17.7



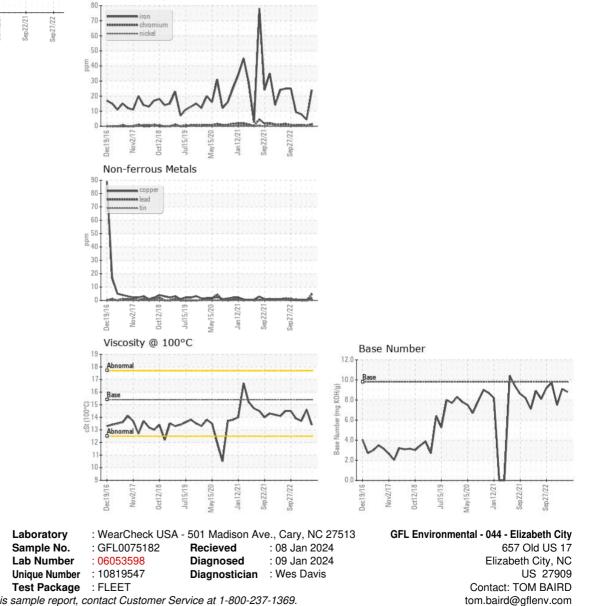
OIL ANALYSIS REPORT





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	13.4	14.6	13.7
GRAPHS						

Ferrous Alloys



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)

T: (252)562-2645

Certificate L2367