

OIL ANALYSIS REPORT

Sample Rating Trend

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NORMAL

Machine Id 10655

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (11 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.

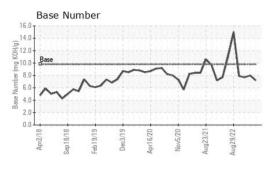
Fluid Condition

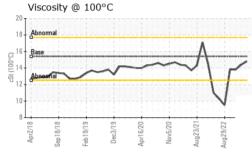
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0081717	GFL0074454	GFL0074547
Sample Date		Client Info		29 Jun 2023	10 May 2023	09 Mar 2023
Machine Age	hrs	Client Info		16600	16201	15802
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>75	23	16	19
Chromium	ppm	ASTM D5185m	>5	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	3	3	2
Lead	ppm	ASTM D5185m	>25	0	<1	<1
Copper	ppm	ASTM D5185m	>100	29	60	64
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		mathad	limit/base		laiata m. 1	history 2
		method	IIIIII/Dase	current	nistorv i	
Boron	ppm	method ASTM D5185m	0	current	history 1 2	<1
	ppm ppm					
Boron Barium	ppm	ASTM D5185m	0	1	2	<1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 0 60	1 0 67	2 0 63	<1 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	1 0	2 0	<1 0 56
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	1 0 67 <1 1080	2 0 63 <1	<1 0 56 1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	1 0 67 <1	2 0 63 <1 1075	<1 0 56 1 901
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	1 0 67 <1 1080 1175 1105	2 0 63 <1 1075 1209	<1 0 56 1 901 1220
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	1 0 67 <1 1080 1175	2 0 63 <1 1075 1209 1112	<1 0 56 1 901 1220 980
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	0 0 60 0 1010 1070 1150 1270	1 0 67 <1 1080 1175 1105 1431	2 0 63 <1 1075 1209 1112 1445	<1 0 56 1 901 1220 980 1270
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	0 0 60 0 1010 1070 1150 1270 2060	1 0 67 <1 1080 1175 1105 1431 3585	2 0 63 <1 1075 1209 1112 1445 3768	<1 0 56 1 901 1220 980 1270 3302
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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	0 0 60 1010 1070 1150 1270 2060	1 0 67 <1 1080 1175 1105 1431 3585 current	2 0 63 <1 1075 1209 1112 1445 3768 history 1	<1 0 56 1 901 1220 980 1270 3302 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	1 0 67 <1 1080 1175 1105 1431 3585 current 6	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5	<1 0 56 1 901 1220 980 1270 3302 history 2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base >25	1 0 67 <1 1080 1175 1105 1431 3585 <u>current</u> 6 12	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	1 0 67 <1 1080 1175 1105 1431 3585 current 6 12 2	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	1 0 67 <1 1080 1175 1405 1431 3585 <u>current</u> 6 12 2 2 <u>current</u> 0.6	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6 history 1 0.4	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2 history 2 0.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >20	1 0 67 <1 1080 1175 1105 1431 3585 current 6 12 2 2	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6 history 1	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2 kistory 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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >20	1 0 67 <1 1080 1175 1105 1431 3585 <i>current</i> 6 12 2 2 <i>current</i> 0.6 10.0	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6 history 1 0.4 8.7	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2 7 35 2 history 2 0.4 9.3
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >6 >20	1 0 67 <1 1080 1175 1431 3585 <u>current</u> 6 12 2 2 <u>current</u> 0.6 10.0 22.3	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6 history 1 0.4 8.7 20.8	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2 0.4 9.3 19.7
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 ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 20 1imit/base >6 >20 >20 30	1 0 67 <1 1080 1175 1105 1431 3585 <i>current</i> 6 12 2 <i>current</i> 0.6 10.0 22.3 <i>current</i>	2 0 63 <1 1075 1209 1112 1445 3768 history 1 5 12 6 history 1 0.4 8.7 20.8 history 1	<1 0 56 1 901 1220 980 1270 3302 history 2 7 35 2 history 2 0.4 9.3 19.7 history 2

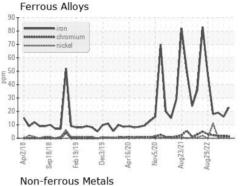


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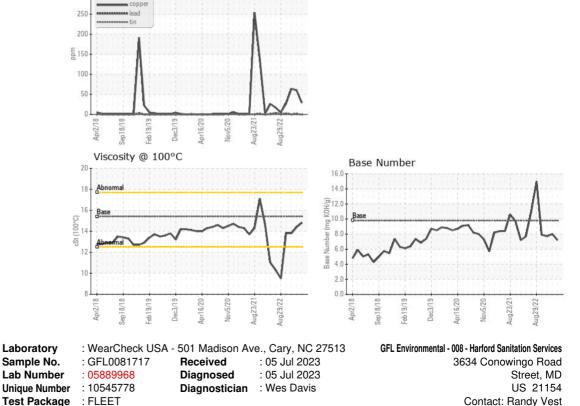




VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	14.4	13.8
GRAPHS						
Ferrous Allovs						



300





 Certificate L2367
 Test Package
 : FLEET

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

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