

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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.

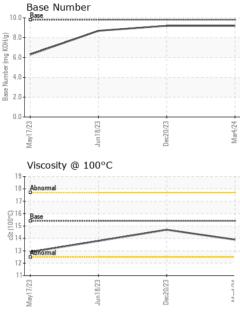
Fluid Condition

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0104265	GFL0105849	GFL0069809
Sample Date		Client Info		04 Mar 2024	20 Dec 2023	18 Jun 2023
Machine Age	hrs	Client Info		15271	15280	15233
Oil Age	hrs	Client Info		600	15280	600
Oil Changed		Client Info		Changed	Not Changd	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	10	0	2
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	6
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	3
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	nnm	ASTM D5185m		•	0	0
Cadmium	ppm	ASTIVI DOTODIII		0	0	0
ADDITIVES	ррш	method	limit/base	-	0 history1	history2
	ppm		limit/base	-	-	-
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 3	history1 4	history2 6 0 54
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 3 0	history1 4 0	history2 6 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 3 0 56	history1 4 0 60	history2 6 0 54
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 3 0 56 0	history1 4 0 60 <1 949 1037	history2 6 0 54 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 3 0 56 0 996 1115 1092	history1 4 0 60 <1 949 1037 1130	history2 6 0 54 <1 946 1041 1086
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	Current 3 0 56 0 996 1115 1092 1265	history1 4 0 60 <1 949 1037 1130 1291	history2 6 0 54 <1 946 1041 1086 1278
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 3 0 56 0 996 1115 1092	history1 4 0 60 <1 949 1037 1130	history2 6 0 54 <1 946 1041 1086 1278 3199
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	Current 3 0 56 0 996 1115 1092 1265	history1 4 0 60 <1 949 1037 1130 1291 3247 history1	history2 6 0 54 <1 946 1041 1086 1278
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm 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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	Current 3 0 56 0 996 1115 1092 1265 3349 current 3	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5	history2 6 0 54 <1 946 1041 1086 1278 3199
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 3 0 56 0 996 1115 1092 1265 3349 Current	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2	history2 6 0 54 <1 946 1041 1086 1278 3199 history2
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 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 3 0 56 0 996 1115 1092 1265 3349 current 3	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3
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	current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 <1 <1 <1 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 limit/base >25 >20 limit/base	current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current 0 current 0.1	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1 0	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 <1 history2 3 <1 <1 history2 0.1
ADDITIVES 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	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1 0 44.2	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 <1 <1 <1 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 limit/base >25 >20 limit/base	current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current 0 current 0.1	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1 0	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 <1 history2 3 <1 <1 history2 0.1
ADDITIVES 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	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >4 >20	current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current 0 current 17.5	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1 0 44.2	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 history2 0.1 5.0
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 ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 25 20 220 imit/base >4 >20 >4 >20	Current 3 0 56 0 996 1115 1092 1265 3349 current 3 2 0 current 0 current 1092	history1 4 0 60 <1 949 1037 1130 1291 3247 history1 5 2 0 history1 0 4.2 17.1	history2 6 0 54 <1 946 1041 1086 1278 3199 history2 3 <1 <1 <1 <1 <1 5.0 17.1



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	14.7	13.8
GRAPHS						
Ferrous Alloys						
iron						
25						
E 15						
10			/			
5						
	the second s					
		23	24			
		Jec20/23	Mar4/24			
May17/23 Jun18/23	5	Dec20/23	Mar4/24			
EZ/L1/Meg Non-ferrous Metals	s	- Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5	Dec20/23	Mar4/24			
Non-ferrous Metals	5					
Non-ferrous Metals	5					
EZILIARY Non-ferrous Metals	5					
Non-ferrous Metals	5		Mar4/24	Base Number		
Non-ferrous Metals	5		Mar4/24	Base Number		
Non-ferrous Metals	5		10.0	Base Number		
Non-ferrous Metals	5		10.0	Base Number		
Non-ferrous Metals	5		10.0	Base Number		
Non-ferrous Metals	5		10.0	Base Number		
Non-ferrous Metals	5		ase Mumber (mg K0H(g) 0.0 9 0.0 100 0.0 100	Base Number		
Viscosity @ 100°C	5		0.0 full per (mg K0H(g) 0.0 full 0.0 fu	Base Number		
Viscosity @ 100°C	5	Dec20(23	10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 10.0 P27+P2W 2.0 0.0	Base		
Non-ferrous Metals	5		10.0 (0)H0X Bul Jaquiny Beg 2.0	Base Number		Decconcia



 Unique Number
 : 10913343
 Diagnosed
 : 07 Mar 2024 - Wes Davis

 Certificate L2367
 Test Package
 : FLEET

 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)

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