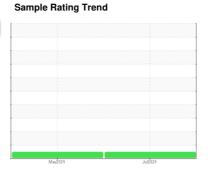


OIL ANALYSIS REPORT



Machine Id **MACK 10091** Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- GAL)





Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

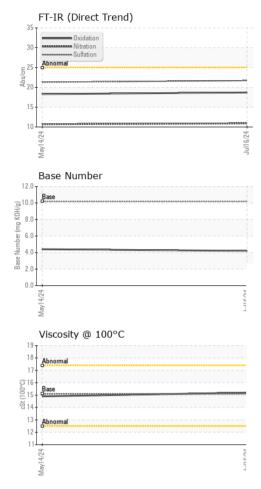
Fluid Condition

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

SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info SBP0007385 SBP0007312 Sample Date Client Info 16 Jul 2024 14 May 2024 Magnesian Machine Age hrs Client Info 479 445 Oil Changed Client Info Changed	GEO LD 15W40 (-	GAL)		May2024	Jul2024		
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 16 Jul 2024 14 May 2024 Machine Age hrs Client Info 8638 8159 Dil Age hrs Client Info 479 445 Dil Changed Client Info Changed Ch	Sample Number		Client Info		SBP0007385	SBP0007312	
Machine Age hrs Client Info 8638 8159			Client Info		16 Jul 2024	14 May 2024	
Dil Age	•	hrs	Client Info		8638		
Client Info Changed		hrs	Client Info		479	445	
NORMAL N	-				Changed	Changed	
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG	-					Ü	
Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 9 12 Chromium ppm ASTM D5185m >5 <1 <1 Nickel ppm ASTM D5185m >5 0 <1 Silver ppm ASTM D5185m >5 0 <1 Aluminum ppm ASTM D5185m >3 0 0 Aluminum ppm ASTM D5185m >40 0 1 Copper ppm ASTM D5185m >40 0 1 Copper ppm ASTM D5185m >4 <1 <1 Copper ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 50 14 5		N	method	limit/base		historv1	historv2
Process Proc							
Property ASTM D5185m S50 9 12 Start	WEAR METALS		method	limit/base	current	history1	history2
Chromium		nnm				•	,
Strickel ppm ASTM D5185m >4 0 0	-				_		
Silver							
Saliver							
Aluminum							
December December							
Copper							
Tin							
Azanadium ppm ASTM D5185m 0 <1 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 14 5 Barium ppm ASTM D5185m 5 0 1 Molybdenum ppm ASTM D5185m 50 51 54 Manganese ppm ASTM D5185m 50 51 54 Manganesium ppm ASTM D5185m 560 522 581 Manganesium ppm ASTM D5185m 780 640 727 Phosphorus ppm ASTM D5185m 780 640 727 Zinc ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 <td>• • • • • • • • • • • • • • • • • • • •</td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td>	• • • • • • • • • • • • • • • • • • • •						
ADDITIVES				>4			
ADDITIVES		ppm					
Soron ppm ASTM D5185m 50 14 5	Cadmium	ppm	ASTM D5185m		0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 51 54 Manganese ppm ASTM D5185m 0 0 <1	Boron	ppm	ASTM D5185m	50	14	5	
Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 560 522 581 Calcium ppm ASTM D5185m 1510 1553 1829 Phosphorus ppm ASTM D5185m 780 640 727 Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Godium ppm ASTM D5185m >20 1 1 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624	Barium	ppm	ASTM D5185m	5	0	1	
Magnesium ppm ASTM D5185m 560 522 581 Calcium ppm ASTM D5185m 1510 1553 1829 Phosphorus ppm ASTM D5185m 780 640 727 Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m >20 1 1 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Sulfation Abs/.1mm *ASTM D7415 >30	Molybdenum	ppm	ASTM D5185m	50	51	54	
Calcium ppm ASTM D5185m 1510 1553 1829 Phosphorus ppm ASTM D5185m 780 640 727 Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m >20 1 1 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION *ASTM D7414 >25 18.7<	Manganese	ppm	ASTM D5185m	0	0	<1	
Phosphorus ppm ASTM D5185m 780 640 727 Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m 4 3 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Sulfation Abs/.1mm *ASTM D7624 >20 10.9 10.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 </td <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>560</td> <th>522</th> <td>581</td> <td></td>	Magnesium	ppm	ASTM D5185m	560	522	581	
Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m 4 3 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	Calcium	ppm	ASTM D5185m	1510	1553	1829	
Zinc ppm ASTM D5185m 870 936 1121 Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m 4 3 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18	Phosphorus	ppm	ASTM D5185m	780	640	727	
Sulfur ppm ASTM D5185m 2040 2250 3026 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 17 Sodium ppm ASTM D5185m 4 3 Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3			ASTM D5185m	870	936	1121	
Solicon ppm ASTM D5185m >25 13 17	Sulfur	ppm	ASTM D5185m	2040	2250	3026	
Sodium ppm ASTM D5185m 4 3 Potassium ppm ASTM D5185m >20 1 1 1 INFRA-RED method limit/base current history1 history2 Soot %	CONTAMINANTS	3	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	Silicon	ppm	ASTM D5185m	>25	13	17	
INFRA-RED	Sodium	ppm	ASTM D5185m		4	3	
Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	Potassium	ppm	ASTM D5185m	>20	1	1	
Nitration Abs/cm *ASTM D7624 >20 10.9 10.7 Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 21.7 21.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	Soot %	%	*ASTM D7844		0	0	
FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 18.7 18.3	Vitration	Abs/cm	*ASTM D7624	>20	10.9	10.7	
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30			
	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.7	18.3	
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.2	4.4	

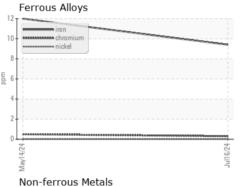


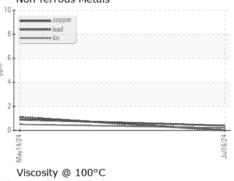
OIL ANALYSIS REPORT

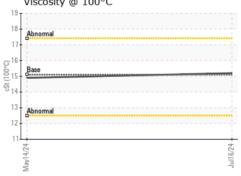


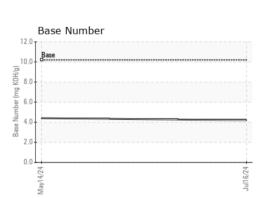
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID DDODEDT	150	and the selection	Para State and a		la faction and	la la la ma O

Visc @ 100°C	cSt	ASTM D445	15.1	15.2	14.9	













Certificate 12367

Sample No.

Lab Number : 06241259 Unique Number : 11130093

: SBP0007385 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received : 18 Jul 2024 Tested Diagnosed

: 19 Jul 2024 : 19 Jul 2024 - Wes Davis

FCC ENVIRONMENTAL SERVICES NEBRASKA LLC 59902 N 16TH ST OMAHA, NE US 68110

Contact: TROY BEAN troy.bean@fccenvironmental.com

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:

F: