

OIL ANALYSIS REPORT

Sample Rating Trend







PETRO CANADA DURON SHP 10W30 (--- QTS)

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

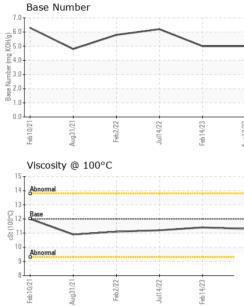
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103241	PCA0091215	PCA0074775
Sample Date		Client Info		12 Aug 2023	14 Feb 2023	14 Jul 2022
Machine Age	mls	Client Info		158564	132080	105544
Oil Age	mls	Client Info		26484	26536	24590
Oil Changed		Client Info		Changed	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
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>120	27	26	21
Chromium	ppm ppm	ASTM D5185m		1	1	<1
Nickel		ASTM D5185m	>5	2	7	2
Titanium	ppm ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m		5	5	4
Lead	ppm	ASTM D5185m	>40	ر 1	1	1
	ppm	ASTM D5185m		4	5	5
Copper Tin	ppm		>330	4 <1	1	1
Antimony	ppm	ASTM D5185m	210			
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
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		ام م مالح میں			المسململو	history.0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2	<1	2
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	2 0	2 0	<1 0	2 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 69	<1 0 63	2 0 62
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 69 <1	<1 0 63 <1	2 0 62 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 0 69 <1 967	<1 0 63 <1 906	2 0 62 <1 950
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 0 69 <1 967 1331	<1 0 63 <1 906 1110	2 0 62 <1 950 1139
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	2 0 69 <1 967 1331 1084	<1 0 63 <1 906 1110 969	2 0 62 <1 950 1139 936
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	2 0 69 <1 967 1331 1084 1379	<1 0 63 <1 906 1110 969 1232	2 0 62 <1 950 1139 936 1221
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	2 0 50 0 950 1050 995	2 0 69 <1 967 1331 1084	<1 0 63 <1 906 1110 969 1232 2412	2 0 62 <1 950 1139 936 1221 2878
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	2 0 50 0 950 1050 995 1180	2 0 69 <1 967 1331 1084 1379	<1 0 63 <1 906 1110 969 1232	2 0 62 <1 950 1139 936 1221
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	2 0 50 950 1050 995 1180 2600	2 0 69 <1 967 1331 1084 1379 3207	<1 0 63 <1 906 1110 969 1232 2412 history1 7	2 0 62 <1 950 1139 936 1221 2878 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base	2 0 69 <1 967 1331 1084 1379 3207 current 6 7	<1 0 63 <1 906 1110 969 1232 2412 history1	2 0 62 <1 950 1139 936 1221 2878 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 method	2 0 50 950 1050 995 1180 2600 limit/base >25	2 0 69 <1 967 1331 1084 1379 3207 current 6	<1 0 63 <1 906 1110 969 1232 2412 history1 7	2 0 62 <1 950 1139 936 1221 2878 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	2 0 69 <1 967 1331 1084 1379 3207 current 6 7	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5	2 0 62 <1 950 1139 936 1221 2878 history2 5 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	2 0 69 <1 967 1331 1084 1379 3207 current 6 7 7	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25 20 limit/base	2 0 69 <1 967 1331 1084 1379 3207 current 6 7 7 7	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 9	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 5 4 5 5 history2
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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >4	2 0 69 <1 967 1331 1084 1379 3207 <i>current</i> 6 7 7 7 <i>current</i> 0.9	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 history1 0.9	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 4 5 5 4 5 history2 0.8
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	2 0 50 0 950 1050 995 1180 2600 imit/base >25 .20 imit/base >20	2 0 69 <1 967 1331 1084 1379 3207 <i>current</i> 6 7 7 <i>current</i> 0.9 10.3	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 9 history1 0.9 10.6 23.4	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 5 4 5 5 history2 0.8 10.6 24.5
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 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 	2 0 69 <1 967 1331 1084 1379 3207 current 6 7 7 current 0.9 10.3 23.5 current	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 history1 0.9 10.6 23.4 history1	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 5 4 5 5 history2 0.8 10.6 24.5 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >20 imit/base >4 >20	2 0 69 <1 967 1331 1084 1379 3207 current 6 7 7 current 0.9 10.3 23.5 current 18.8	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 history1 0.9 10.6 23.4 history1 19.1	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 5 4 5 5 history2 0.8 10.6 24.5 history2 19.8
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 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 	2 0 69 <1 967 1331 1084 1379 3207 current 6 7 7 current 0.9 10.3 23.5 current	<1 0 63 <1 906 1110 969 1232 2412 history1 7 5 9 history1 0.9 10.6 23.4 history1	2 0 62 <1 950 1139 936 1221 2878 history2 5 4 5 5 4 5 5 history2 0.8 10.6 24.5 history2



OIL ANALYSIS REPORT

VISUAL



Certificate L2367	Laboratory Sample No. Lab Number Unique Number Test Package	: PCA0103 : <mark>0593592</mark> : 1062119 : FLEET	3241 5 6	Receive Diagnos Diagnos	01 Madison Ave., Cary, NC 275 Received : 28 Aug 2023 Diagnosed : 28 Aug 2023 Diagnostician : Wes Davis ce at 1-800-237-1369.			3 NW WHITE & CO - ANDERSON DIVISION 2605 RIVER RE PIEDMONT, SC US 29673 Contact: James Threat jthreatt@nwwhite.com			
		C-0001) 450 - 0001 - 00001 - 00001 - 0001 - 0001 - 0001 - 0001 - 0001 - 0001 -	Aug31/21	reb.2/22	Feb14/23	Aug12/23	(DATO BUI AGUERA) (DATO BUI AGU	Aug31/21	Feb2/22	Juli 4/22 +	Auro12/23
			y @ 100°(Fet		6.0	Number			
		30 20 10 0 100 100 100 100 100 100 100		Jul 4/22		Aug12/23					
			sopper ead in								
		Non-fer	rous Meta	Jul14/22		Aug12/23					
		甚 30 20 10									
Teb.2//22	Feb14/23		Alloys ron chromium nickel								
		GRAP	HS	001	7,011110-110	12.00		•	11.4	11.6	
		FLUID Visc @ 10		CRTIES	method ASTM D445	limit/bas	se ci 11.:	urrent	history ⁻ 11.4	1 his 11.2	story2
I I I I		Free Wat		scalar	*Visual		NE		NEG	NEG	à
	Fe	Odor Emulsifie	d Water	scalar scalar	*Visual *Visual	NORML >0.2	NO NE	RML G	NORML NEG	NOF	
Jul14/22	Feb14/23 Aug12/23	Appearan	се	scalar	*Visual	NORML		RML	NORML	NOF	
		Sand/Dirt		scalar	*Visual	NONE	NO		NONE	NOM	
		Debris		scalar scalar	*Visual	NONE	NO NO		NONE	NON	
		Precipitat Silt	e	scalar	*Visual *Visual	NONE NONE	NO		NONE NONE	NON	
	Yellow Me		scalar	*Visual	NONE	NO		NONE	NOM		

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