

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 391337 Component Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

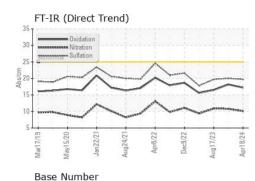
Fluid Condition

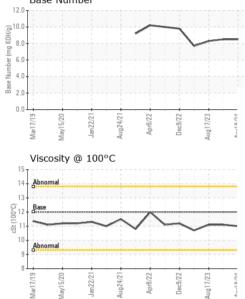
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123903	PCA0115237	PCA0104298
Sample Date		Client Info		18 Apr 2024	19 Dec 2023	17 Aug 2023
Machine Age	mls	Client Info		132966	123113	113008
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	15	12	17
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	4
Lead	ppm	ASTM D5185m	>40	2	2	2
Copper	ppm	ASTM D5185m	>330	6	5	4
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
					0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base			-
		method		current	history1	history2
Boron	ppm	method ASTM D5185m	2	current 2	history1 15	history2 6
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 2 0	history1 15 0	history2 6 0
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 2 0 65	history1 15 0 66	history2 6 0 64
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 2 0 65 1	history1 15 0 66 <1	history2 6 0 64 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 2 0 65 1 881	history1 15 0 66 <1 889	history2 6 0 64 <1 935
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	Current 2 0 65 1 881 1059	history1 15 0 66 <1 889 1248	history2 6 0 64 <1 935 1143 1072 1328
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	Current 2 0 65 1 881 1059 922	history1 15 0 66 <1 889 1248 1125	history2 6 0 64 <1 935 1143 1072
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	Current 2 0 65 1 881 1059 922 1198	history1 15 0 66 <1 889 1248 1125 1284	history2 6 0 64 <1 935 1143 1072 1328
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 ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 2 0 65 1 881 1059 922 1198 2966	history1 15 0 66 <1 889 1248 1125 1284 3068	history2 6 0 64 <1 935 1143 1072 1328 3807
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	2 0 50 950 1050 995 1180 2600	current 2 0 65 1 881 1059 922 1198 2966 current	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600	current 2 0 65 1 881 1059 922 1198 2966 current 4	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current 2 0 65 1 881 1059 922 1198 2966 current 4 <1	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 6 3 6 3 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 ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base	current 2 0 65 1 881 1059 922 1198 2966 current 4 <1 6 current 0.8	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3 2 history1 0.9	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 6 3 6 3 11 11 128 1328 3807 history2 3 1.1
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 TS ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current 2 0 65 1 881 1059 922 1198 2966 current 4 <1 6 current 0.8 10.1	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3 2 history1 0.9 10.8	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 6 3 10 11 10.9
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base	current 2 0 65 1 881 1059 922 1198 2966 current 4 <1 6 current 0.8	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3 2 history1 0.9	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 6 3 6 3 11 11 128 1328 3807 history2 3 1.1
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	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current 2 0 65 1 881 1059 922 1198 2966 current 4 <1 6 current 0.8 10.1	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3 2 history1 0.9 10.8	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 6 3 10 11.1 10.9
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	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	2 0 65 1 881 1059 922 1198 2966 current 4 <1 6 current 0.8 10.1 19.7	history1 15 0 66 <1 889 1248 1125 1284 3068 history1 5 3 2 history1 0.9 10.8 20.0	history2 6 0 64 <1 935 1143 1072 1328 3807 history2 3 6 3 history2 1.1 10.9 19.7



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
5	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
and an and a strength of the s	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
and a second sec	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
/23 -	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Aug17/23 Apr18/24	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
4	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual	20.2	NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.1	11.1
	GRAPHS						
	Iron (ppm)				Lead (ppm)		
	250 Severe			10	Severe		
Aug17/23	200 - Severe			8			
Aug	150 - 100 - Abnormal			udd 4			
				1	4		
	50			2			
	20 - 12	22	22+	24	20 50 61 61 61 7 7 7 7	22-	22
	Mar17/19 - May15/20 - Jan22/21 -	Aug24/21 Apr8/22	Dec9/22 -	Apr18/24 -	Mar17/19 May15/20 Jan22/21	Aug24/21 Apr8/22	Dec9/22 Aug17/23 Apr18/24
		4	Au	A		4	A AL
-	Aluminum (ppm)				Chromium (p	pr n)	
	40 - Severe			4	Smurro		
7/23	and a second sec			E 3	0 - Abnormal		
Aug17/23	10			1			
-					0		
		Aug24/21	Dec9/22 -	Apr18/24 -		Aug24/21- Apr8/22 -	Dec9/22 - Aug17/23 - Apr18/24 -
	Mar1 May1 Jan2	Aug	Dec Aug1	Aprl	Mar17/19 May15/20 Jan22/21	Augi Apr	Dec Aug1 Apr1
	Copper (ppm)			Silicon (p	Silicon (ppm)		
	500			8		, , , , , , , , , , , , , , , , , , , ,	
	400 Severe			6	0		
	300 g			E 4	0		
	±200				Abnormal		
	100	1-1-1-		2			
	51 50 13	21	22 -			21	22
	Mar17/19 May15/20 Jan22/21	Aug24/21 Apr8/22	Dec9/22 Aug 17/23	Apr18/24	Mar17/19 May15/20 Jan22/21	Aug24/21 Apr8/22	Dec9/22 Aug17/23 Apr18/24
		4	L	Ä		AL	Au
	Viscosity @ 100°C			12.	Base Number		
				(^B /H0			
	14 Abnormal			(B)H0.10.1 B(B)H0.10.10.1 B(B)H0.10.10.10.10.10.10.10.10.10.10.10.10.10	0		<u> </u>
	G: 00 12 - Base	\sim		ja 6.			
	⁶³ 10 - Abnormal	~		4.			
	8			2. 8 2.			
		ug24/21- Apr8/22 -	Dec9/22 -			ug24/21-	Dec9/22 - Aug17/23 - Apr18/24 -
	Mar17/19 May15/20 Jan22/21	Aug24/21 Apr8/22	Dec9/22 Aug17/23	Apr18/24	Mar17/19 May15/20 Jan22/21	Aug24/21 Apr8/22	Dec9/22 Aug17/23 Apr18/24
	E.		~				
aboratory	: WearCheck USA - 50	1 Madiso	n Ave., Carv	NC 27513	M	LLER TRUCK	K LEASING #119
Sample No.							NDUSTRIAL AVE
ab Number	: 06157237	Teste	d : 24	Apr 2024			CK HEIGHTS, NJ
nique Number	: 10992660		nosed : 24	Apr 2024 - W	les Davis		US 07604
est Package	: MOB 1 (Additional Te					Contact: N	/IKE LONGETTE

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) F: (201)528-7053

Certificate L2367

Contact/Location: MIKE LONGETTE - MILRUT

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