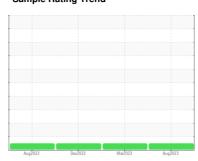


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **326728**

Component **Diesel Engine**

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

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

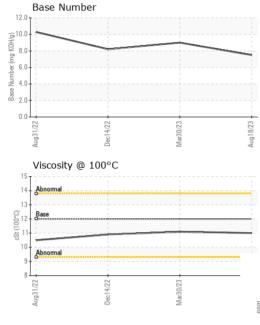
Fluid Condition

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

Aug2022 Dec2022 Mar2023 Aug2023						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104253	PCA0095940	PCA0088077
Sample Date		Client Info		18 Aug 2023	30 Mar 2023	14 Dec 2022
Machine Age	mls	Client Info		46037	33045	24313
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	32	16	71
Chromium	ppm	ASTM D5185m	>20	1	0	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	13	5	11
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	8	6	27
Tin	ppm	ASTM D5185m	>15	2	<1	4
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2 20
	ppm	ASTM D5185m				
Boron	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	2	11	12	20
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	11 0	12 0	20
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	11 0 62	12 0 63	20 0 50
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	11 0 62 2	12 0 63 1	20 0 50 8
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	11 0 62 2 900	12 0 63 1 885	20 0 50 8 660
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	11 0 62 2 900 1176	12 0 63 1 885 1204	20 0 50 8 660 1775
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 ASTM D5185m	2 0 50 0 950 1050 995	11 0 62 2 900 1176 974	12 0 63 1 885 1204 1000	20 0 50 8 660 1775 812
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 ASTM D5185m	2 0 50 0 950 1050 995 1180	11 0 62 2 900 1176 974 1239	12 0 63 1 885 1204 1000 1214	20 0 50 8 660 1775 812 1049
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	11 0 62 2 900 1176 974 1239 3630	12 0 63 1 885 1204 1000 1214 3323	20 0 50 8 660 1775 812 1049 2750
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	11 0 62 2 900 1176 974 1239 3630 current	12 0 63 1 885 1204 1000 1214 3323 history1 22	20 0 50 8 660 1775 812 1049 2750
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	11 0 62 2 900 1176 974 1239 3630 current	12 0 63 1 885 1204 1000 1214 3323 history1	20 0 50 8 660 1775 812 1049 2750 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	11 0 62 2 900 1176 974 1239 3630 current 9	12 0 63 1 885 1204 1000 1214 3323 history1 22	20 0 50 8 660 1775 812 1049 2750 history2 9 6
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25	11 0 62 2 900 1176 974 1239 3630 current 9 1	12 0 63 1 885 1204 1000 1214 3323 history1 22 1	20 0 50 8 660 1775 812 1049 2750 history2 9 6 14
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	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	11 0 62 2 900 1176 974 1239 3630 current 9 1 12	12 0 63 1 885 1204 1000 1214 3323 history1 22 1 7	20 0 50 8 660 1775 812 1049 2750 history2 9 6 14
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	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	11 0 62 2 900 1176 974 1239 3630 current 9 1 12 current	12 0 63 1 885 1204 1000 1214 3323 history1 22 1 7 history1 0.3	20 0 50 8 660 1775 812 1049 2750 history2 9 6 14 history2 0.6
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 method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	11 0 62 2 900 1176 974 1239 3630 current 9 1 12 current 0.6 9.8	12 0 63 1 885 1204 1000 1214 3323 history1 22 1 7 history1 0.3 7.5	20 0 50 8 660 1775 812 1049 2750 history2 9 6 14 history2 0.6 11.4
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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	11 0 62 2 900 1176 974 1239 3630 current 9 1 12 current 0.6 9.8 20.4	12 0 63 1 885 1204 1000 1214 3323 history1 22 1 7 history1 0.3 7.5 18.7	20 0 50 8 660 1775 812 1049 2750 history2 9 6 14 history2 0.6 11.4 23.1



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

	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
,	Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.1	10.9
	GRAPHS						
250	Iron (ppm)			1	Lead (ppm)		
200	Severe				Severe		
돌 ¹⁵⁰	+			шdd	60		
		_			40 Abnormal		-
50					0		
	Aug31/22		Mar30/23	Aug18/23	Aug31/22	Dec14/22	Mar30/23 -
	₹ å Aluminum (ppm)		M	An	₹ Chromium (p		Au Au
50	T:				50 T 7	Pili)	
40					40 Severe		
E 30	Abnormal			Edd	20 Abnormal		
10		_			10		
0			/23		727	722 +	723
	Aug31/22		Mar30/23	Aug18/23	Aug31/22	Dec14/22	Mar30/23 ·
400	Copper (ppm)				Silicon (ppm)		
300	Abnormal				60		
틆 200				Edd			
100	1.				Abnormal 20		
0					0		
	Aug31/22		Mar30/23	Aug18/23 -	Aug31/22	Dec14/22	Mar30/23 -
	₹ discosity @ 100°C		Ž	Au	₹ Base Number		M. Au
16	T:			- 12 - 12			
္ 14	Abnormal			M KOH	3.0		
(0.001) ¹²	Base			mper (r	6.0		
10	Abnormal			Base Number (mg KOH/g)	2.0		
8							
	Aug31/22		Mar30/23	Aug18/23	Aug31/22	Dec14/22	Mar30/23 Aug18/23





Laboratory Sample No. Lab Number

Unique Number : 10629257

: PCA0104253 : 05938645

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

: 30 Aug 2023 : 31 Aug 2023 Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: TBN) 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)

MILLER TRUCK LEASING #119

39 INDUSTRIAL AVE HASBROUCK HEIGHTS, NJ US 07604

Contact: MIKE LONGETTE

mlongette@millertransgroup.com T:

Report Id: MILRUT [WUSCAR] 05938645 (Generated: 08/31/2023 09:36:56) Rev: 1

Contact/Location: MIKE LONGETTE - MILRUT

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