

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 301445

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- G

DIAGNOSIS

Recommendation

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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

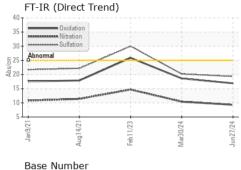
Fluid Condition

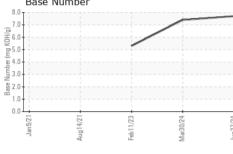
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

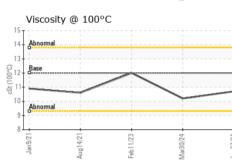
GAL)		Jan 2021	Aug2021	Feb 2023 Mar 2024	Jun2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0129127	PCA0121407	PCA0090117
Sample Date		Client Info		27 Jun 2024	30 Mar 2024	11 Feb 2023
Machine Age	mls	Client Info		135458	126906	107157
Oil Age	mls	Client Info		135458	126906	0
Oil Changed		Client Info		Changed	Changed	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	9	8	12
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		4	6	27
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	2
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	0	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
						11.
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 9	history1	history2 14
	ppm					
Boron	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	2	9	11	14
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2	9	11 0	14
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	9 0 52	11 0 52	14 0 41
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	9 0 52 0	11 0 52 <1	14 0 41 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	9 0 52 0 855	11 0 52 <1 842	14 0 41 1 683
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	9 0 52 0 855 1123	11 0 52 <1 842 1059	14 0 41 1 683 1397
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 ASTM D5185m	2 0 50 0 950 1050 995	9 0 52 0 855 1123 1082	11 0 52 <1 842 1059 979	14 0 41 1 683 1397 806
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180	9 0 52 0 855 1123 1082 1282	11 0 52 <1 842 1059 979 1144	14 0 41 1 683 1397 806 1088
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	9 0 52 0 855 1123 1082 1282 3871	11 0 52 <1 842 1059 979 1144 3343	14 0 41 1 683 1397 806 1088 3259
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	9 0 52 0 855 1123 1082 1282 3871 current	11 0 52 <1 842 1059 979 1144 3343 history1	14 0 41 1 683 1397 806 1088 3259 history2
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	9 0 52 0 855 1123 1082 1282 3871 current	11 0 52 <1 842 1059 979 1144 3343 history1	14 0 41 1 683 1397 806 1088 3259 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	9 0 52 0 855 1123 1082 1282 3871 current 4	11 0 52 <1 842 1059 979 1144 3343 history1	14 0 41 1 683 1397 806 1088 3259 history2 10 4
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	9 0 52 0 855 1123 1082 1282 3871 current 4 3	11 0 52 <1 842 1059 979 1144 3343 history1 4 2	14 0 41 1 683 1397 806 1088 3259 history2 10 4
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	9 0 52 0 855 1123 1082 1282 3871 current 4 3 2	11 0 52 <1 842 1059 979 1144 3343 history1 4 2 0	14 0 41 1 683 1397 806 1088 3259 history2 10 4 1
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	9 0 52 0 855 1123 1082 1282 3871 current 4 3 2 current 0.4	11 0 52 <1 842 1059 979 1144 3343 history1 4 2 0 history1 0.6	14 0 41 1 683 1397 806 1088 3259 history2 10 4 1 history2 0.1
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	ASTM D5185m Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	9 0 52 0 855 1123 1082 1282 3871 current 4 3 2 current 0.4 9.3	11 0 52 <1 842 1059 979 1144 3343 history1 4 2 0 history1 0.6 10.4	14 0 41 1 683 1397 806 1088 3259 history2 10 4 1 history2 0.1 14.7
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	9 0 52 0 855 1123 1082 1282 3871 current 4 3 2 current 0.4 9.3 19.3	11 0 52 <1 842 1059 979 1144 3343 history1 4 2 0 history1 0.6 10.4 20.2	14 0 41 1 683 1397 806 1088 3259 history2 10 4 1 history2 0.1 14.7 30.0



OIL ANALYSIS REPORT



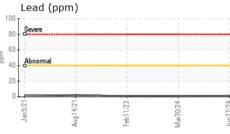


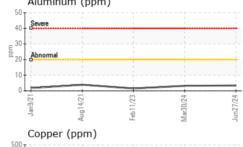


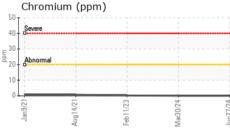
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

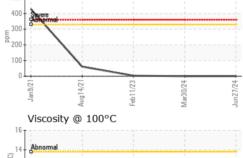
FLUID FROF		memod			HISTOLAL	HISTOLYZ
Visc @ 100°C	cSt	ASTM D445	12.00	10.7	10.2	12.0

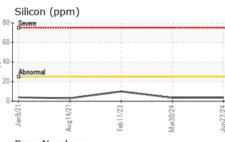
/23	1/24	/24
Feb 11	/lar30	Jun27/24
	_	,
	Feb11/23	Feb11/23 -

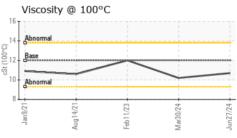


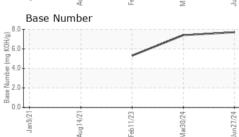
















Certificate 12367

Laboratory Sample No.

Lab Number : 06234438

: PCA0129127

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** Unique Number : 11123272

: 12 Jul 2024 : 12 Jul 2024 Diagnosed

: 12 Jul 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

US 19116 Contact: ROSTY VITER rviter@millertransgroup.com T: (215)552-9832

MILLER TRUCK LEASING #118

2196 BENNETT ROAD

PHILADELPHIA, PA

* - 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: (215)552-9892 Contact/Location: ROSTY VITER - MILPHINE

Report Id: MILPHINE [WUSCAR] 06234438 (Generated: 07/12/2024 17:30:36) Rev: 1