

OIL ANALYSIS REPORT

Sample Rating Trend

Area (SPG413849) Air Gas - Tractor [Air Gas - Tractor] 314A314008

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

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

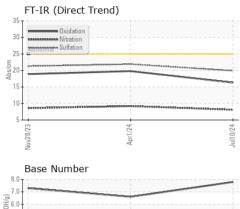
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

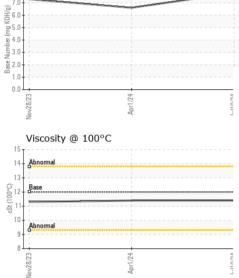
			12 . 14 /1			
SAMPLE INFORI	VIATION		limit/base	current	history1	history2
Sample Number		Client Info		PCA0120038	PCA0120042	PCA0096890
Sample Date		Client Info		10 Jul 2024	01 Apr 2024	28 Nov 2023
Machine Age	mls	Client Info		93725	66771	35130
Oil Age	mls	Client Info		26954	31627	0
Oil Changed		Client 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	>80	20	42	41
Chromium	ppm	ASTM D5185m	>5	2	3	2
Nickel	ppm	ASTM D5185m	>2	<1	0	1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	9	34	39
Lead	ppm	ASTM D5185m	>30	0	0	<1
Copper	ppm	ASTM D5185m	>150	15	64	189
Tin	ppm	ASTM D5185m	>5	<1	2	4
Vanadium	ppm	ASTM D5185m		<1	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 0	history1 7	history2 12
	ppm ppm					
Boron		ASTM D5185m	2	0	7	12
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	0 0	7 0	12 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 65	7 0 56	12 0 57
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 65 0	7 0 56 <1	12 0 57 2
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 0 65 0 993	7 0 56 <1 893	12 0 57 2 921
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	0 0 65 0 993 1198	7 0 56 <1 893 1163	12 0 57 2 921 1317
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	0 0 65 0 993 1198 1063	7 0 56 <1 893 1163 942	12 0 57 2 921 1317 1026
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 50 950 1050 995 1180	0 0 65 0 993 1198 1063 1305	7 0 56 <1 893 1163 942 1176	12 0 57 2 921 1317 1026 1319
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 0 950 1050 995 1180 2600	0 0 65 0 993 1198 1063 1305 2337	7 0 56 <1 893 1163 942 1176 2218	12 0 57 2 921 1317 1026 1319 2346
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	0 0 65 0 993 1198 1063 1305 2337 current	7 0 56 <1 893 1163 942 1176 2218 history1	12 0 57 2 921 1317 1026 1319 2346 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 0 65 0 993 1198 1063 1305 2337 current 2	7 0 56 <1 893 1163 942 1176 2218 history1 4	12 0 57 2 921 1317 1026 1319 2346 history2 4
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	2 0 50 0 950 1050 995 1180 2600 limit/base >20	0 0 65 0 993 1198 1063 1305 2337 current 2 2 <1	7 0 56 <1 893 1163 942 1176 2218 history1 4 1	12 0 57 2 921 1317 1026 1319 2346 history2 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	0 0 65 0 993 1198 1063 1305 2337 current 2 2 <1 14	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >20	0 0 65 0 993 1198 1063 1305 2337 current 2 <1 14 current	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71 71 history1	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97 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 >20 limit/base >20	0 0 65 0 993 1198 1063 1305 2337 current 2 2 <1 14	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71 history1 0.8	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >20 <i>imit/base</i> >3 >20	0 0 65 0 993 1198 1063 1305 2337 <i>current</i> 2 2 <1 14 <i>current</i> 0.6 8.1	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71 71 0.8 9.2	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97 history2 0.6 8.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 20 20 20 20 20 20 20 2	0 0 65 0 993 1198 1063 1305 2337 <i>current</i> 2 <1 14 <i>current</i> 0.6 8.1 19.9 <i>current</i>	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71 4 1 71 0.8 9.2 21.9 history1	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97 history2 0.6 8.6 21.3 history2
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 >20 imit/base >3 >20 >3	0 0 65 0 993 1198 1063 1305 2337 current 2 <1 14 2 <1 14 0.6 8.1 19.9	7 0 56 <1 893 1163 942 1176 2218 history1 4 1 71 4 1 71 0.8 9.2 21.9	12 0 57 2 921 1317 1026 1319 2346 history2 4 4 4 97 history2 0.6 8.6 21.3

NORMAL



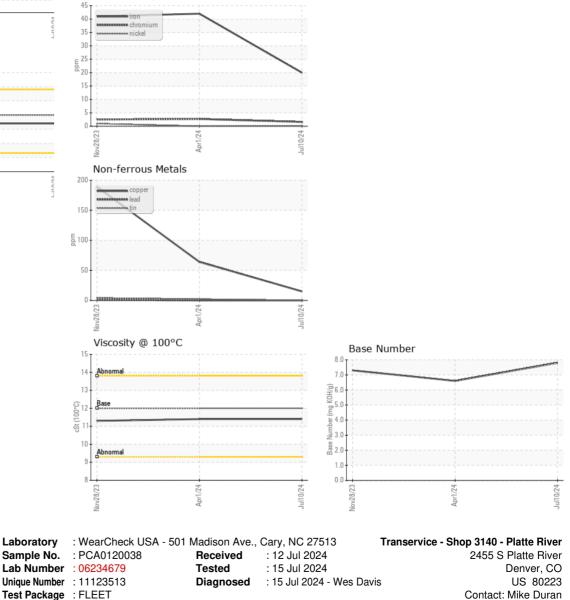
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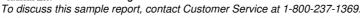




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
Visc @ 100°C	cSt	ASTM D445	12.00	11.4	11.4	11.3
GRAPHS						

Ferrous Alloys





* - 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)

Certificate 12367

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