

OIL ANALYSIS REPORT

(P1019461) Preferred Service-Tractor [Preferred Service-Tractor] 192A02037

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

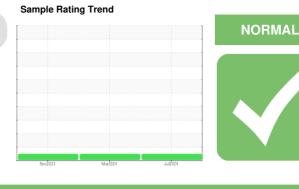
All component wear rates are normal.

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.

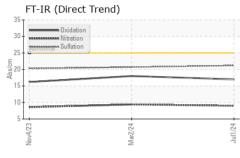


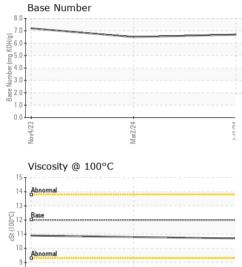
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0126897	PCA0116687	PCA0109411
Sample Date		Client Info		01 Jul 2024	02 Mar 2024	04 Nov 2023
Machine Age	mls	Client Info		264843	247038	228376
Oil Age	mls	Client Info		17805	18662	23806
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<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			>100	22	29	20
-	ppm			<1	<1	
Chromium Nickel	ppm	ASTM D5185m ASTM D5185m	>20	<1 <1	2	<1
	ppm		>2	<1	<1	<1
Titanium Silver	ppm	ASTM D5185m ASTM D5185m	>2	<1 <1	<1	<1
	ppm					
Aluminum	ppm	ASTM D5185m		4	5 3	3
Lead	ppm	ASTM D5185m	>40	2		
Copper	ppm	ASTM D5185m ASTM D5185m		5	10 1	12 <1
Tin	ppm		>15	0		
Vanadium	ppm	ASTM D5185m		<1 0	<1	<1
Cadmium	ppm	ASTM D5185m				<
		20100		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 2	-		
		method		current	history1	history2
Boron	ppm	method ASTM D5185m	2	current 4	history1 <1	history2 0
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 4 0	history1 <1 0	history2 0 0
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 4 0 59	history1 <1 0 64	history2 0 0 58
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 4 0 59 <1	history1 <1 0 64 <1	history2 0 0 58 <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 4 0 59 <1 930	history1 <1 0 64 <1 1001	history2 0 0 58 <1 897
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 4 0 59 <1 930 1085	history1 <1 0 64 <1 1001 1092	history2 0 0 58 <1 897 1020
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm 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 4 0 59 <1 930 1085 951	history1 <1 0 64 <1 1001 1092 1086	history2 0 58 <1 897 1020 951
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 4 0 59 <1 930 1085 951 1120	history1 <1 0 64 <1 1001 1092 1086 1256	history2 0 58 <1 897 1020 951 1166
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	2 0 50 0 950 1050 995 1180 2600	Current 4 0 59 <1 930 1085 951 1120 2881	<1 0 64 <1 1001 1092 1086 1256 3136	history2 0 0 58 <1 897 1020 951 1166 2933
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 4 0 59 <1 930 1085 951 1120 2881 current	<1 0 64 <1 1001 1092 1086 1256 3136 history1	history2 0 0 58 <1 897 1020 951 1166 2933 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600	current 4 0 59 <1 930 1085 951 1120 2881 current 2	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4
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 0 950 1050 995 1180 2600 limit/base	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 2 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 TS	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0 current 0.5	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4 history1	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 bistory2
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 TS ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0 current	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4 history1 0.5	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 2. 4. 2. 4. 2. 4. 2. 4. 2. 4. 0.4
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 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0 current 0 current 0.5 9.0	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4 history1 0.5 9.4	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 2. 4. 2. 4. 2. 4. 0.4 8.6
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 TS ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 method	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 20 >20 >30 >30 imit/base	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0 current 0 current 0.5 9.0 21.2 current	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4 history1 0.5 9.4 20.7 history1	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 2. 4. 0.4 8.6 20.3 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	method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	current 4 0 59 <1 930 1085 951 1120 2881 current 2 10 0 current 0.5 9.0 21.2	<1 0 64 <1 1001 1092 1086 1256 3136 history1 5 1 4 history1 0.5 9.4 20.7	history2 0 0 58 <1 897 1020 951 1166 2933 history2 4 2 4 2 4 0.4 8.6 20.3



Nov4/23

OIL ANALYSIS REPORT





Mar2/24



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)

Certificate 12367

Laboratory

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