

OIL ANALYSIS REPORT

JV TRANSPORTATION CONSULTANTS INC. 642186

Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

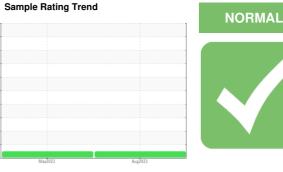
All component wear rates are normal.

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.

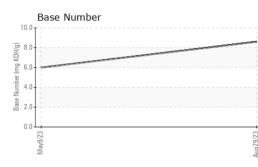


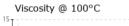


SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104306	PCA0095944	
Sample Date		Client Info		29 Aug 2023	09 May 2023	
Machine Age	mls	Client Info		15770	84093	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	39	17	
Chromium	ppm	ASTM D5185m	>20	3	2	
Nickel	ppm	ASTM D5185m	>4	2	0	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	27	9	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m	>330	188	20	
Tin	ppm	ASTM D5185m	>15	5	2	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron		ASTM D5185m	2	37	5	
BOIOII	ppm	ASTIVI DOTODITI	2	37	0	
Barium	ppm ppm	ASTM D5185m	0	0	0	
				-		
Barium	ppm	ASTM D5185m	0	0	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 43	0 74	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 43 3 503 1685	0 74 <1 961 1119	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 43 3 503 1685 750	0 74 <1 961	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180	0 43 3 503 1685 750 976	0 74 <1 961 1119 907 1220	
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	0 50 0 950 1050 995	0 43 3 503 1685 750	0 74 <1 961 1119 907	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 43 3 503 1685 750 976	0 74 <1 961 1119 907 1220	
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	0 50 0 950 1050 995 1180 2600	0 43 3 503 1685 750 976 2513	0 74 <1 961 1119 907 1220 2701 history1 3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	0 50 0 950 1050 995 1180 2600 limit/base >25	0 43 3 503 1685 750 976 2513 current 7 3	0 74 <1 961 1119 907 1220 2701 history1 3 1	 history2
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	0 50 0 950 1050 995 1180 2600 limit/base >25	0 43 3 503 1685 750 976 2513 current 7	0 74 <1 961 1119 907 1220 2701 history1 3	 history2
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	0 50 0 950 1050 995 1180 2600 limit/base >25	0 43 3 503 1685 750 976 2513 current 7 3	0 74 <1 961 1119 907 1220 2701 history1 3 1	 history2
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	0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 43 3 503 1685 750 976 2513 current 7 3 68	0 74 <1 961 1119 907 1220 2701 history1 3 1 1 19 history1 0.5	 history2
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	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20	0 43 3 503 1685 750 976 2513 current 7 3 68 current	0 74 <1 961 1119 907 1220 2701 history1 3 1 19 history1	 history2 history2
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	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 43 3 503 1685 750 976 2513 current 7 3 68 current 0.4	0 74 <1 961 1119 907 1220 2701 history1 3 1 1 19 history1 0.5	 history2 history2
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	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 43 3 503 1685 750 976 2513 current 7 3 68 current 0.4 8.0	0 74 <1 961 1119 907 1220 2701 history1 3 1 19 history1 0.5 9.4	 history2 history2
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	0 50 950 1050 995 1180 2600 limit/base >25 20 limit/base >3 >20 >30	0 43 3 503 1685 750 976 2513 current 7 3 68 current 0.4 8.0 22.9	0 74 <1 961 1119 907 1220 2701 history1 3 1 1 19 history1 0.5 9.4 22.4	 history2 history2 history2



OIL ANALYSIS REPORT









Certificate L2367

Laboratory

Sample No.

Lab Number

* - 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

T: