

OIL ANALYSIS REPORT





HINO 373971

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.

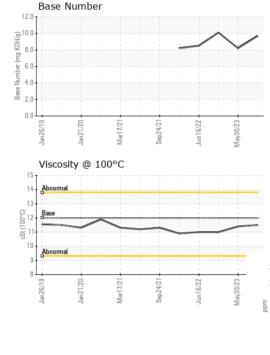
Fluid Condition

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

SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101939	PCA0093175	PCA0078891
Sample Date		Client Info		09 Sep 2023	30 May 2023	08 Oct 2022
Machine Age	mls	Client Info		0	148832	134624
Oil Age	mls	Client Info		0	0	6440
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method	20	NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		22	23	11
Chromium	ppm	ASTM D5185m	>20	<1	1	2
Nickel		ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		u <1	0	0
Silver	ppm		~ 2	<1	0	<1
	ppm	ASTM D5185m	>3	-	8	6
Aluminum	ppm	ASTM D5185m	>20	11		
Lead	ppm	ASTM D5185m	>40	1	5	0
Copper	ppm		>330	1	2	1
Tin	ppm		>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	6	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	62	64	69
Manganese	ppm	ASTM D5185m	0	<1	1	<1
Magnesium						
	ppm	ASTM D5185m	950	963	963	893
-	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	963 1210	963 1193	893 1140
Calcium Phosphorus						
Calcium	ppm	ASTM D5185m	1050	1210	1193	1140
Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m	1050 995	1210 1059	1193 1058	1140 997
Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180	1210 1059 1338	1193 1058 1323	1140 997 1250
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base	1210 1059 1338 3828	1193 1058 1323 3740	1140 997 1250 3435
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1050 995 1180 2600 limit/base	1210 1059 1338 3828 current	1193 1058 1323 3740 history1	1140 997 1250 3435 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	1050 995 1180 2600 limit/base >25	1210 1059 1338 3828 current 4	1193 1058 1323 3740 history1 4	1140 997 1250 3435 history2 4
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25	1210 1059 1338 3828 current 4 7	1193 1058 1323 3740 history1 4 11	1140 997 1250 3435 history2 4 6
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base	1210 1059 1338 3828 current 4 7 3	1193 1058 1323 3740 history1 4 11 2	1140 997 1250 3435 history2 4 6 2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base >3	1210 1059 1338 3828 current 4 7 3 3 current	1193 1058 1323 3740 history1 4 11 2 history1	1140 997 1250 3435 history2 4 6 2 2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base >3	1210 1059 1338 3828 current 4 7 3 3 current 1.4	1193 1058 1323 3740 history1 4 11 2 history1 2.3	1140 997 1250 3435 history2 4 6 2 2 history2 1.2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm % Abs/.tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	1210 1059 1338 3828 <u>current</u> 4 7 3 <u>current</u> 1.4 10.8	1193 1058 1323 3740 history1 4 11 2 history1 2.3 16.2	1140 997 1250 3435 history2 4 6 2 history2 1.2 1.2 12.1
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm % Abs/.tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30 imit/base	1210 1059 1338 3828 current 4 7 3 current 1.4 10.8 19.9	1193 1058 1323 3740 history1 4 11 2 history1 2.3 16.2 27.0	1140 997 1250 3435 history2 4 6 2 history2 1.2 1.2 1.2 12.1 21.7



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Certificate L2367

Laboratory

Sample No.

Lab Number