

OIL ANALYSIS REPORT

SCHEID PRODUCE INC **HINO SPI39**

Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 10W30 (18 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 Rating Trend



NORMAL

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110611	PCA0083861	PCA0071715
Sample Date		Client Info		16 Feb 2024	06 Feb 2023	28 Sep 2022
Machine Age	mls	Client Info		198787	178866	174470
Oil Age	mls	Client Info		19921	4396	4305
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
			11 11 11			
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	8	15	8
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	70	66
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
				•	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES	maa	method ASTM D5185m	limit/base	current	history1 84	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	limit/base 2 0	current 2 0	history1 84 0	history2 66 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50	current 2 0 60	history1 84 0 16	history2 66 0 20
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0	current 2 0 60 <1	history1 84 0 16 <1	history2 66 0 20 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950	2 0 60 <1 1048	history1 84 0 16 <1 478	history2 66 0 20 <1 540
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050	current 2 0 60 <1 1048 1182	history1 84 0 16 <1 478 1575	history2 66 0 20 <1 540 1607
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995	current 2 0 60 <1 1048 1182 1152	history1 84 0 16 <1 478 1575 999	history2 66 0 20 <1 540 1607 971
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180	2 0 60 <1 1048 1182 1152 1358	history1 84 0 16 <1 478 1575 999 1163	history2 66 0 20 <1 540 1607 971 1129
ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600	current 2 0 60 <1 1048 1182 1152 1358 3494	history1 84 0 16 <1 478 1575 999 1163 3544	history2 66 0 20 <1 540 1607 971 1129 4126
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	limit/base 2 0 50 0 950 1050 995 1180 2600	current 2 0 60 <1 1048 1182 1152 1358 3494	history1 84 0 16 <1 478 1575 999 1163 3544 history1	history2 66 0 20 <1 540 1607 971 1129 4126 history2
ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base	current 2 0 60 <1 1048 1182 1152 1358 3494 current	history1 84 0 16 <1 478 1575 999 1163 3544 history1	history2 66 0 20 <1 540 1607 971 1129 4126 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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	limit/base 2 0 50 0 950 1050 995 1180 2600 Limit/base >25	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 2	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2
ADDITIVES 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 3 .1	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 2600 255 >25	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 3 3 <1	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0
ADDITIVES 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	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 20 limit/base	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 3 <1 current current current	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2
ADDITIVES 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	method ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 <1 current 0 <0.4	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 4 0.9	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2 0.8
ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 20 limit/base >3 >20	current 2 0 60 <1 1048 1182 1152 1358 3494 current 3 3 <1 current 0.4 10.1	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 history1 0.9 11.5	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2 0 history2 0.8 11.3
ADDITIVES 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 D78444 *ASTM D7624	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 limit/base >20 >30 >30	current 2 0 60 <1 1048 1152 1358 3494 current 3 0.4 10.1 19.2	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 history1 0.9 11.5 21.4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2 0 history2 0.8 11.3 22.5
ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3 >20 30	current 2 0 60 <1 1048 1152 1358 3494 current 3 <1 0.4 10.1 19.2 current	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 history1 0.9 11.5 21.4	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2 0 history2 0.8 11.3 22.5 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	method ASTM D5185m ASTM D7844 *ASTM D7414	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 limit/base >3 >20 30 limit/base	current 2 0 60 <1 1048 1152 1358 3494 current 3 0.4 10.1 19.2 current	history1 84 0 16 <1 478 1575 999 1163 3544 history1 5 4 history1 0.9 11.5 21.4 history1 18.5	history2 66 0 20 <1 540 1607 971 1129 4126 history2 3 2 0 history2 0 history2 0.8 11.3 22.5 history2 18.9



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OIL ANALYSIS REPORT

VISUAL





Certificate L2367

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