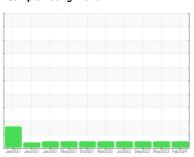


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id **DT759** Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 10W30 (--- 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

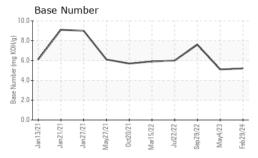
Fluid Condition

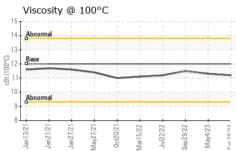
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

(021 Mar2022 Jul2022 Sep2022 Maya		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116087	PCA0095707	PCA0081293
Sample Date		Client Info		29 Feb 2024	04 May 2023	29 Sep 2022
Machine Age	mls	Client Info		238904	187326	151026
Oil Age	mls	Client Info		42086	147180	110880
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	ppm	ASTM D5185m	>120	13	15	0
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	<1	1
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	4	3	2
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	mag	ASTM D5185m	2	3	3	11
Boron Barium	ppm		2	3	3	11 <1
Barium	ppm	ASTM D5185m	0	0	0	<1
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 68	0 69	<1 46
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 68 0	0 69 <1	<1 46 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 68 0 944	0 69 <1 968	<1 46 0 806
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 68 0 944 1078	0 69 <1 968 1064	<1 46 0 806 1192
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 68 0 944 1078 1001	0 69 <1 968 1064 980	<1 46 0 806 1192 896
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 68 0 944 1078	0 69 <1 968 1064	<1 46 0 806 1192
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	0 50 0 950 1050 995 1180	0 68 0 944 1078 1001 1265	0 69 <1 968 1064 980 1256	<1 46 0 806 1192 896 1075
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	0 68 0 944 1078 1001 1265 2693	0 69 <1 968 1064 980 1256 3132	<1 46 0 806 1192 896 1075 3074
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 68 0 944 1078 1001 1265 2693 current	0 69 <1 968 1064 980 1256 3132 history1	<1 46 0 806 1192 896 1075 3074 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	0 68 0 944 1078 1001 1265 2693	0 69 <1 968 1064 980 1256 3132 history1	<1 46 0 806 1192 896 1075 3074 history2 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base	0 68 0 944 1078 1001 1265 2693 current 9	0 69 <1 968 1064 980 1256 3132 history1 6	<1 46 0 806 1192 896 1075 3074 history2 2 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 68 0 944 1078 1001 1265 2693 current 9 2 3	0 69 <1 968 1064 980 1256 3132 history1 6 4 3	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2
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	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base	0 68 0 944 1078 1001 1265 2693 current 9 2 3	0 69 <1 968 1064 980 1256 3132 history1 6 4 3 history1 0.6	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2 0.4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 68 0 944 1078 1001 1265 2693 current 9 2 3 current 0.6 10.1	0 69 <1 968 1064 980 1256 3132 history1 6 4 3 history1 0.6 10.1	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2 0.4 9.4
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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76144	0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base	0 68 0 944 1078 1001 1265 2693 current 9 2 3 current 0.6 10.1 21.9	0 69 <1 968 1064 980 1256 3132 history1 6 4 3 history1 0.6 10.1 22.2	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2 0.4 9.4 21.3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method	0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >4 >20 >30 limit/base	0 68 0 944 1078 1001 1265 2693 current 9 2 3 current 0.6 10.1 21.9	0 69 <1 968 1064 980 1256 3132 history1 6 4 3 history1 0.6 10.1 22.2 history1	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2 0.4 9.4 21.3 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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76144	0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >4 >20 >30	0 68 0 944 1078 1001 1265 2693 current 9 2 3 current 0.6 10.1 21.9	0 69 <1 968 1064 980 1256 3132 history1 6 4 3 history1 0.6 10.1 22.2	<1 46 0 806 1192 896 1075 3074 history2 2 0 3 history2 0.4 9.4 21.3



OIL ANALYSIS REPORT

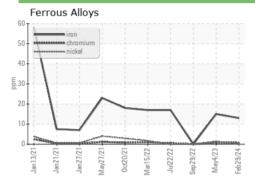


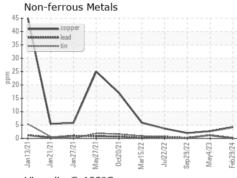


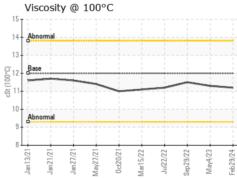
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

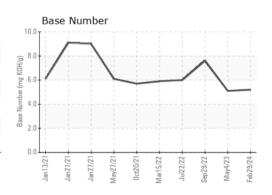
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.2	11.3	11.5

GRAPHS













Certificate L2367

Laboratory Sample No.

: PCA0116087 Lab Number : 06108425 Unique Number : 10911922 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 05 Mar 2024 : 06 Mar 2024 **Tested**

Diagnosed : 06 Mar 2024 - Wes Davis

NW WHITE & CO - COLUMBIA DIVISION

100 INDEPENDENCE BLVD

COLUMBIA, SC US 29210

Contact: GEORGE EDWARDS gedwards@nwwhite.com

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)

T:

F: