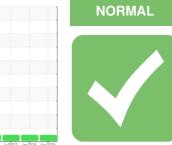


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

DT665 Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (36 mls)

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.

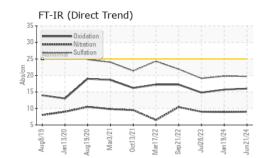
Fluid Condition

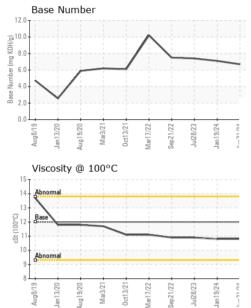
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0124320	PCA0111640	PCA0095262
Sample Date		Client Info		21 Jun 2024	19 Jan 2024	28 Jul 2023
Machine Age	mls	Client Info		75000	75000	75000
Oil Age	mls	Client Info		46821	46821	46821
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
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	>110	11	10	11
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	4	3	3
Lead	ppm	ASTM D5185m	>45	0	0	0
Copper	ppm	ASTM D5185m	>85	4	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base	current 3	history1 6	history2 2
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	2	3	6	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	3 <1	6 0	2 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	3 <1 70	6 0 58	2 0 64
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	3 <1 70 <1	6 0 58 <1	2 0 64 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	3 <1 70 <1 917	6 0 58 <1 929	2 0 64 <1 954
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	3 <1 70 <1 917 1125	6 0 58 <1 929 1084	2 0 64 <1 954 1188
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	3 <1 70 <1 917 1125 1017	6 0 58 <1 929 1084 1033	2 0 64 <1 954 1188 1025
Boron 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	2 0 50 950 1050 995 1180	3 <1 70 <1 917 1125 1017 1250	6 0 58 <1 929 1084 1033 1210	2 0 64 <1 954 1188 1025 1300
Boron 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	2 0 50 950 1050 995 1180 2600	3 <1 70 <1 917 1125 1017 1250 2739	6 0 58 <1 929 1084 1033 1210 2889	2 0 64 <1 954 1188 1025 1300 3549
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	3 <1 70 <1 917 1125 1017 1250 2739 current	6 0 58 <1 929 1084 1033 1210 2889 history1	2 0 64 <1 954 1188 1025 1300 3549 history2
Boron 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	3 <1 70 <1 917 1125 1017 1250 2739 current 5	6 0 58 <1 929 1084 1033 1210 2889 history1 4	2 0 64 <1 954 1188 1025 1300 3549 history2 4
Boron 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 method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	3 <1 70 <1 917 1125 1017 1250 2739 current 5 0	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >30	3 <1 70 <1 917 1125 1017 1250 2739 current 5 0 4	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 1	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >30 >20 Imit/base	3 <1 70 <1 917 1125 1017 1250 2739 current 5 0 4	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 1 1 history1	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3 3
Boron 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	2 0 50 0 950 1050 995 1180 2600 limit/base >30 20 limit/base >33	3 <1 70 <1 917 1125 1017 1250 2739 <i>current</i> 5 0 4 <i>current</i>	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 1 1 history1 0.4	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3 history2 0.5
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >30 20 <i>imit/base</i> >3 >20	3 <1 70 <1 917 1125 1017 1250 2739 current 5 0 4 current 0.5 9.0	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 2 1 4 2 1 history1 0.4 8.9	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3 history2 0.5 9.0
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >30 imit/base >3 20 >3	3 <1 70 <1 917 1125 1017 1250 2739 <i>current</i> 5 0 4 <i>current</i> 0.5 9.0 19.7	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 1 1 <u>history1</u> 0.4 8.9 19.8	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3 history2 0.5 9.0 19.1
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 0 50 0 950 1050 995 1180 2600 imit/base >30 >20 >30 >20 >30 >30 >30	3 <1 70 <1 917 1125 1017 1250 2739 <i>current</i> 5 0 4 <i>current</i> 0.5 9.0 19.7 <i>current</i>	6 0 58 <1 929 1084 1033 1210 2889 history1 4 2 2 1 1 0.4 8.9 19.8 history1	2 0 64 <1 954 1188 1025 1300 3549 history2 4 2 3 history2 0.5 9.0 19.1 history2



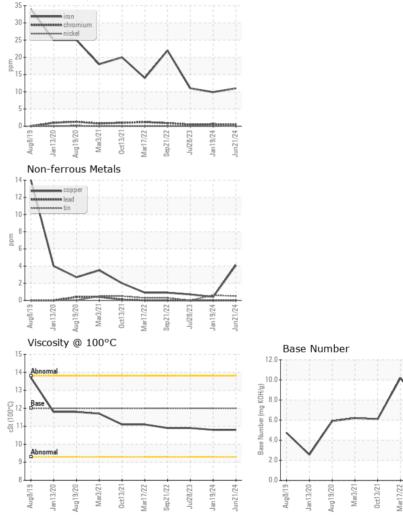
OIL ANALYSIS REPORT





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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.8	10.8	10.9
GRAPHS						

Ferrous Alloys





Sample No. : PCA0124320 Received : 02 Jul 2024 1491 YENMASSEE HIGHWAY Lab Number : 06225787 Tested : 03 Jul 2024 VARNVILLE, SC Unique Number : 11109280 Diagnosed : 03 Jul 2024 - Wes Davis Test Package : FLEET Contact: VINCENT BULLOCK Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. bullockvince514@gmail.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: NWWVAR [WUSCAR] 06225787 (Generated: 07/03/2024 05:16:45) Rev: 1

Laboratory

Submitted By: DAVID WEBB

Jul28/23

Sep 21/22

NW WHITE & CO - BEAUFORT DIVISION

un21/24

Jan 19/24

US 29944

T:

F: