

Area (N/A) Walgreens - Yard Horse [Walgreens - Yard Horse] 136A82001

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

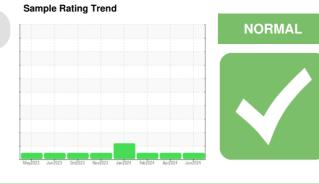
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

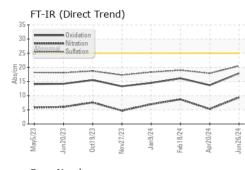
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

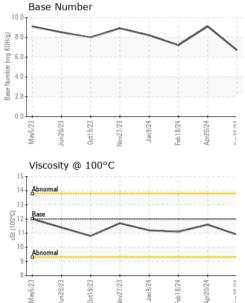


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0127885	PCA0117860	PCA0117907
Sample Date		Client Info		26 Jun 2024	20 Apr 2024	18 Feb 2024
Machine Age	hrs	Client Info		13656	12999	12387
Oil Age	hrs	Client Info		657	25000	746
Oil Changed		Client Info		Not Changd	Changed	Not Changd
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	>100	19	2	4
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	4	0	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	6	<1	2
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 2	current 4	history1 12	history2 2
	ppm ppm		2			
Boron		ASTM D5185m	2	4	12	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	4 1	12 0	2 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	4 1 59	12 0 54	2 0 58
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	4 1 59 <1	12 0 54 0	2 0 58 <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	4 1 59 <1 1085	12 0 54 0 864	2 0 58 <1 974
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	4 1 59 <1 1085 1308	12 0 54 0 864 1090	2 0 58 <1 974 1122
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	4 1 59 <1 1085 1308 1170	12 0 54 0 864 1090 1015	2 0 58 <1 974 1122 1058
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	4 1 59 <1 1085 1308 1170 1457	12 0 54 0 864 1090 1015 1182	2 0 58 <1 974 1122 1058 1303
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	4 1 59 <1 1085 1308 1170 1457 4049	12 0 54 0 864 1090 1015 1182 3421	2 0 58 <1 974 1122 1058 1303 3029
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	4 1 59 <1 1085 1308 1170 1457 4049 current	12 0 54 0 864 1090 1015 1182 3421 history1	2 0 58 <1 974 1122 1058 1303 3029 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	4 1 59 <1 1085 1308 1170 1457 4049 current 4	12 0 54 0 864 1090 1015 1182 3421 history1 4	2 0 58 <1 974 1122 1058 1303 3029 history2 2
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 50 950 1050 995 1180 2600 limit/base >25	4 1 59 <1 1085 1308 1170 1457 4049 <u>current</u> 4 1	12 0 54 0 864 1090 1015 1182 3421 history1 4 0	2 0 58 <1 974 1122 1058 1303 3029 history2 2 <1
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 imit/base >25	4 1 59 <1 1085 1308 1170 1457 4049 <u>current</u> 4 1 4	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0	2 0 58 <1 974 1122 1058 1303 3029 history2 2 2 <1 1
Boron 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	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	4 1 59 <1 1085 1308 1170 1457 4049 current 4 1 4 1 4 Current	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0 0 bistory1	2 0 58 <1 974 1122 1058 1303 3029 history2 2 <1 1 1
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 >25 >20 limit/base >3	4 1 59 <1 1085 1308 1170 1457 4049 <u>current</u> 4 1 4 <u>current</u> 0.3	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0 0 history1 0.1	2 0 58 <1 974 1122 1058 1303 3029 history2 2 2 <1 1 1 history2 0.3
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	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	4 1 59 <1 1085 1308 1170 1457 4049 <u>current</u> 4 1 4 <u>current</u> 0.3 9.4	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0 history1 0.1 5.3	2 0 58 <1 974 1122 1058 1303 3029 history2 2 2 <1 1 1 history2 0.3 8.7
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	4 1 59 <1 1085 1308 1170 1457 4049 <u>current</u> 4 1 4 1 4 <u>current</u> 0.3 9.4 20.5	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0 history1 0.1 5.3 17.9	2 0 58 <1 974 1122 1058 1303 3029 history2 2 <1 1 1 <u>history2</u> 0.3 8.7 19.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 20 >20 >30 >30 imit/base	4 1 59 <1 1085 1308 1170 1457 4049 Current 4 1 4 Current 0.3 9.4 20.5 Current	12 0 54 0 864 1090 1015 1182 3421 history1 4 0 0 history1 0.1 5.3 17.9 history1	2 0 58 <1 974 1122 1058 1303 3029 history2 2 <1 1 1 history2 0.3 8.7 19.0 history2



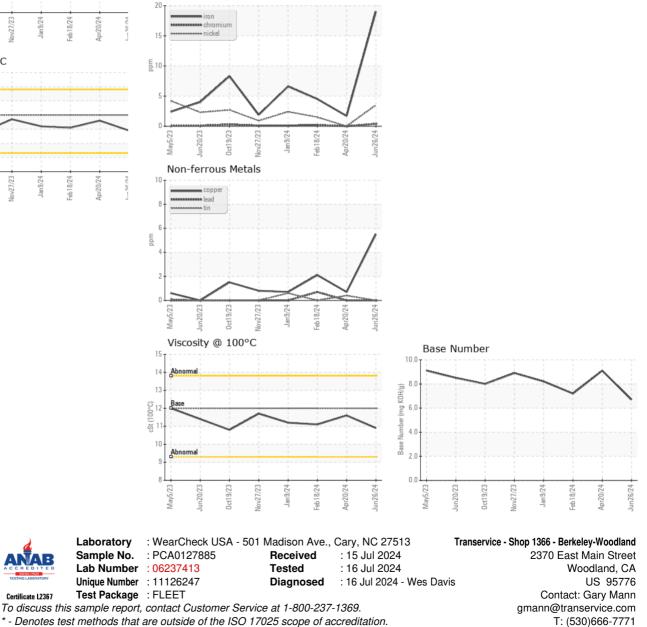
OIL ANALYSIS REPORT





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	10.9	11.6	11.1
GRAPHS						

Ferrous Alloys



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

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Certificate 12367

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