

(TEMP) Walgreens - Yard Horse [Walgreens - Yard Horse] 136A81261 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

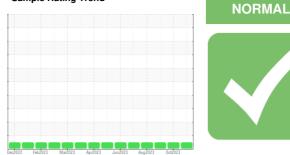
All component wear rates are normal.

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 Rating Trend

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SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0112892	PCA0103790	PCA0103832
Sample Date		Client Info		13 Nov 2023	11 Oct 2023	12 Sep 2023
Machine Age	hrs	Client Info		7624	7359	7093
Oil Age	hrs	Client Info		531	266	544
Oil Changed		Client Info		Changed	Not Changd	Changed
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	23	9	20
Chromium	ppm	ASTM D5185m		1	<1	1
Nickel	ppm	ASTM D5185m	>4	2	2	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	1	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 0	history2 <1
	ppm ppm					
Boron		ASTM D5185m	0	2	0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	2 0	0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	2 0 57	0 0 59	<1 0 60
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	2 0 57 <1	0 0 59 0	<1 0 60 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	2 0 57 <1 937	0 0 59 0 977	<1 0 60 <1 902
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	2 0 57 <1 937 1015	0 0 59 0 977 1047	<1 0 60 <1 902 1062
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	0 0 60 0 1010 1070 1150	2 0 57 <1 937 1015 970	0 0 59 0 977 1047 1051	<1 0 60 <1 902 1062 965
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	0 0 60 0 1010 1070 1150 1270	2 0 57 <1 937 1015 970 1221	0 0 59 0 977 1047 1051 1298	<1 0 60 <1 902 1062 965 1176
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	0 0 60 1010 1070 1150 1270 2060	2 0 57 <1 937 1015 970 1221 2919	0 0 59 0 977 1047 1051 1298 3243	<1 0 60 <1 902 1062 965 1176 3075
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	0 0 60 1010 1070 1150 1270 2060	2 0 57 <1 937 1015 970 1221 2919 current	0 0 59 0 977 1047 1051 1298 3243 history1	<1 0 60 <1 902 1062 965 1176 3075 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	0 0 60 1010 1070 1150 1270 2060	2 0 57 <1 937 1015 970 1221 2919 current 2	0 0 59 0 977 1047 1051 1298 3243 history1	<1 0 60 <1 902 1062 965 1176 3075 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 ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base	2 0 57 <1 937 1015 970 1221 2919 current 2 0	0 0 59 0 977 1047 1051 1298 3243 history1 2 1	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <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	0 0 0 1010 1070 1150 1270 2060 limit/base >25	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 2 1	<1 0 60 <1 902 1062 965 1176 3075 history2 4 < 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 ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0 0 0	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 <1 <1 history1	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <1 <1 <1 history2
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	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0 0 0 current	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 2 1 <1 <1 history1 0.8	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <1 <1 <1 history2 1.3
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	0 0 0 1010 1070 1150 1270 2060 ilmit/base >25 ilmit/base >20	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0 0 current 1.4 1.4 10.9	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 2 1 <1 <1 history1 0.8 8.0	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <1 <1 <1 history2 1.3 9.8
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	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20 imit/base >3 >20	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0 0 0 current 1.4 1.4 10.9 25.4	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 <1 <1 kistory1 0.8 8.0 21.9	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <1 <1 <1 history2 1.3 9.8 24.4
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 D7844	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20 imit/base >3 >20	2 0 57 <1 937 1015 970 1221 2919 current 2 0 0 0 current 1.4 10.9 25.4 current	0 0 59 0 977 1047 1051 1298 3243 history1 2 1 2 1 <1 <1 0.8 8.0 21.9 history1	<1 0 60 <1 902 1062 965 1176 3075 history2 4 <1 <1 istory2 1.3 9.8 24.4 history2



Abnorma

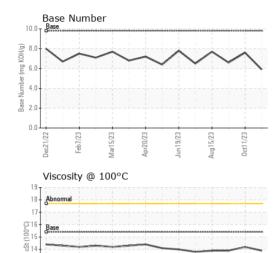
Feb7/23

Mar15/23

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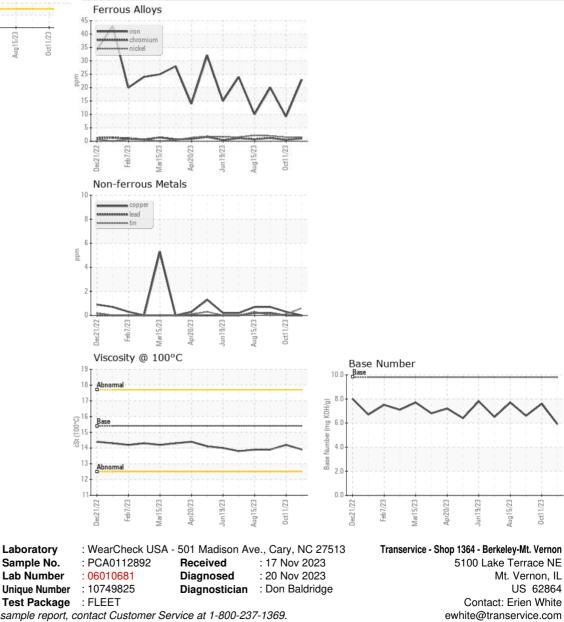
Dec21/22

OIL ANALYSIS REPORT



Jun19/23

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	15.4	13.9	14.2	13.9
GRAPHS						





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)

Submitted By: Erien White

T: (618)244-8726

F: (618)244-8791

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