

## (TEMP) Walgreens - Yard Horse Machine Id [Walgreens - Yard Horse] 136A81252

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Top Up Amount: GAL )

#### Wear

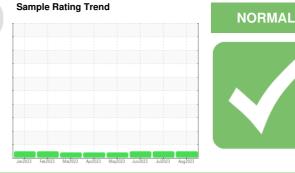
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

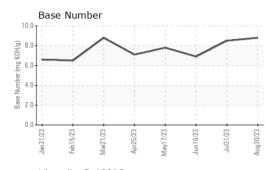
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

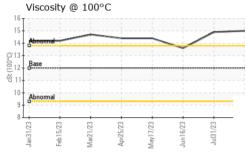


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0091543	PCA0091551	PCA0091508
Sample Date		Client Info		30 Aug 2023	31 Jul 2023	16 Jun 2023
Machine Age	hrs	Client Info		6242	6085	5924
Oil Age	hrs	Client Info		200	161	100
Oil Changed		Client Info		Oil Added	Oil Added	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	14	10	22
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	2	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	1	3
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	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		history2 <1
	ppm ppm				history1	
Boron		ASTM D5185m	2	2	history1 0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 0	history1 0 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 61	history1 0 0 63	<1 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 61 <1	history1 0 0 63 0	<1 0 61 <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	2 0 61 <1 1014	history1 0 63 0 1033	<1 0 61 <1 855
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	2 0 61 <1 1014 1085	history1 0 63 0 1033 1159	<1 0 61 <1 855 1044
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	2 0 61 <1 1014 1085 1126	history1 0 63 0 1033 1159 1118	<1 0 61 <1 855 1044 982
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 61 <1 1014 1085 1126 1374	history1 0 63 0 1033 1159 1118 1359	<1 0 61 <1 855 1044 982 1177
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 0 61 <1 1014 1085 1126 1374 3988	history1 0 63 0 1033 1159 1118 1359 3933	<1 0 61 <1 855 1044 982 1177 3250
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 0 61 <1 1014 1085 1126 1374 3988 current	history1 0 63 0 1033 1159 1118 1359 3933 history1	<1 0 61 <1 855 1044 982 1177 3250 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 <b>method</b>	2 0 50 950 1050 995 1180 2600 imit/base >25	2 0 61 <1 1014 1085 1126 1374 3988 current 6	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4	<1 0 61 <1 855 1044 982 1177 3250 history2 5
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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25	2 0 61 <1 1014 1085 1126 1374 3988 current 6 3	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0
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 <b>limit/base</b> >25	2 0 61 <1 1014 1085 1126 1374 3988 current 6 3 1	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3   0   history1   0   0   50   1033	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0 2
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 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	2 0 61 <1 1014 1085 1126 1374 3988 current 6 3 1 1	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3   0   history1	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0 2 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	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	2 0 61 <1 1014 1085 1126 1374 3988 <u>current</u> 6 3 1 1 <u>current</u> 0.8	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3   0   history1   0   0   50   1033	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0 2 2 history2 1.4
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	2 0 61 <1 1014 1085 1126 1374 3988 <i>current</i> 6 3 1 <i>current</i> 0.8 7.8	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3   0   history1   0   5   6.7	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0 2 5 0 2 2 history2 1.4 1.2
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 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	2 0 61 <1 1014 1085 1126 1374 3988 <u>current</u> 6 3 1 1 <u>current</u> 0.8 7.8 18.5	history1   0   0   63   0   1033   1159   1118   1359   3933   history1   4   3   0   history1   0   0.5   6.7   18.1	<1 0 61 <1 855 1044 982 1177 3250 history2 5 0 2 5 0 2 <u>history2</u> 1.4 11.2 22.9

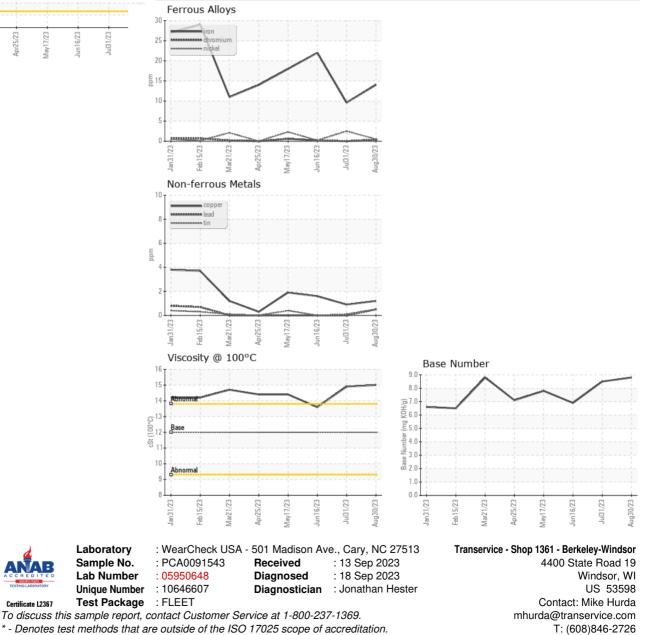


# **OIL ANALYSIS REPORT**





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	15.0	14.9	13.6
GRAPHS						



\* - 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)

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