

## (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.

#### Wear

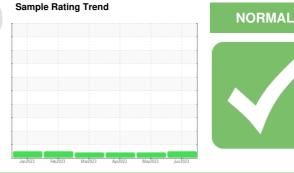
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

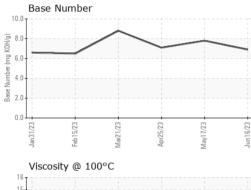
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

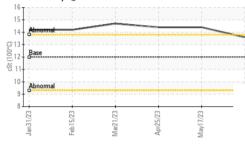


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0091508	PCA0091487	PCA0091499
Sample Date		Client Info		16 Jun 2023	17 May 2023	25 Apr 2023
Machine Age	hrs	Client Info		5924	5702	5620
Oil Age	hrs	Client Info		100	200	200
Oil Changed		Client Info		Changed	Oil Added	Oil Added
Sample Status				NORMAL	ATTENTION	ATTENTION
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		ASTM D5185m	>100	22	18	14
Chromium	ppm ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	<1	2	0
Titanium	ppm	ASTM D5185m	~	0	<1	0
Silver		ASTM D5185m	~3	0	<1	0
Aluminum	ppm ppm		>20	3	1	1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm		>330	2	2	<1
Tin	ppm		>15	0	<1	0
Vanadium	ppm	ASTM D5185m	210	0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
	le le			-	-	
ADDITIVES		method				history2
	mag					
Boron	ppm	ASTM D5185m	2	<1	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	<1 0	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	<1 0 61	0 0 61	0 0 60
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	<1 0 61 <1	0 0 61 <1	0 0 60 <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	<1 0 61 <1 855	0 0 61 <1 1057	0 0 60 <1 956
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	<1 0 61 <1 855 1044	0 0 61 <1	0 0 60 <1 956 1055
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	<1 0 61 <1 855	0 0 61 <1 1057 1138	0 0 60 <1 956
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	<1 0 61 <1 855 1044 982	0 0 61 <1 1057 1138 1091	0 0 60 <1 956 1055 1018
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	<1 0 61 <1 855 1044 982 1177	0 0 61 <1 1057 1138 1091 1418	0 0 60 <1 956 1055 1018 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	<1 0 61 <1 855 1044 982 1177 3250	0 0 61 <1 1057 1138 1091 1418 3719	0 0 60 <1 956 1055 1018 1303 3335
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	<1 0 61 <1 855 1044 982 1177 3250 current	0 0 61 <1 1057 1138 1091 1418 3719 history1	0 0 60 <1 956 1055 1018 1303 3335 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	<1 0 61 <1 855 1044 982 1177 3250 current 5	0 0 61 <1 1057 1138 1091 1418 3719 history1 6	0 0 60 <1 956 1055 1018 1303 3335 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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 Limit/base >25	<1 0 61 <1 855 1044 982 1177 3250 current 5 0	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3	0 0 60 <1 956 1055 1018 1303 3335 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	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	<1 0 61 <1 855 1044 982 1177 3250 current 5 0 2	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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>limit/base</b> >25 -20	<1 0 61 <1 855 1044 982 1177 3250 current 5 0 2	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3 3	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0 0 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	<1 0 61 <1 855 1044 982 1177 3250 <u>current</u> 5 0 2 2 <u>current</u> 1.4	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3 3 history1 1.1	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0 history2 0.9
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>limit/base</i> >25 >20 <i>limit/base</i>	<1 0 61 <1 855 1044 982 1177 3250 current 5 0 2 2 current 1.4 1.2	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3 history1 1.1 1.1 10.5	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0 history2 0.9 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20 >30	<1 0 61 <1 855 1044 982 1177 3250 current 5 0 2 2 current 1.4 1.4 11.2 22.9	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3 history1 1.1 10.5 21.1	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0 0 history2 0.9 9.0 18.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	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 2600 255 20 220 220 20 20 20 20 20 20 20 20 20 2	<1 0 61 <1 855 1044 982 1177 3250 Current 5 0 2 Current 1.4 11.2 22.9 Current	0 0 61 <1 1057 1138 1091 1418 3719 history1 6 3 3 history1 1.1 10.5 21.1 history1	0 0 60 <1 956 1055 1018 1303 3335 history2 4 1 0 0 history2 0.9 9.0 18.0 history2



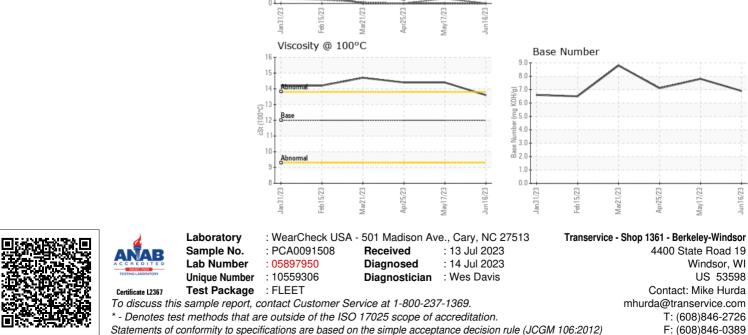
# **OIL ANALYSIS REPORT**





Report Id: TSV1361 [WUSCAR] 05897950 (Generated: 07/14/2023 11:36:00) Rev: 1

Yellow Metal Precipitate Silt Sand/Dirt Sand/Dirt Sand/Dirt Sand/Dirt Score State St	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	method *Visual ASTM D445	limit/base NONE NONE NONE NONE NONE NORML NORML >0.2 limit/base 12.00	Current NONE NONE NONE NONE NORML NORML NEG NEG NEG Lurrent 13.6	history1 NONE NONE NONE NONE NONE NORML NORML NEG NEG history1 14.4	history2 NONE NONE NONE NONE NONE NONE NORML NORML NEG NEG history2 14.4
Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water FLUID PROPER Visc @ 100°C GRAPHS Ferrous Alloys	scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NONE NORML NORML >0.2 limit/base	NONE NONE NONE NONE NORML NORML NEG NEG	NONE NONE NONE NONE NORML NORML NEG NEG history1	NONE NONE NONE NONE NORML NORML NEG NEG history2
Precipitate Silt Silt Silt Sand/Dirt Silt Sand/Dirt Silt Sand/Dirt Silt Sand/Dirt Silt Sand/Dirt Silt Silt Silt Silt Silt Silt Silt Sil	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual method	NONE NONE NONE NORML NORML >0.2 limit/base	NONE NONE NONE NORML NORML NEG NEG	NONE NONE NONE NORML NORML NEG NEG history1	NONE NONE NONE NORML NORML NEG NEG history2
Silt Silt Silt Silt Second Sec	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual method	NONE NONE NORML NORML >0.2 limit/base	NONE NONE NORML NORML NEG NEG	NONE NONE NORML NORML NEG NEG history1	NONE NONE NORML NORML NEG NEG history2
Debris Sand/Dirt Sand/Dirt Sand/Dirt Sand/Dirt Sand/Dirt Sand Performance Standard Sandard San	scalar scalar scalar scalar scalar scalar Scalar	*Visual *Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2 limit/base	NONE NORML NORML NEG NEG	NONE NORML NORML NEG NEG history1	NONE NORML NORML NEG NEG history2
Sand/Dirt Sand/Dirt Sand/Dirt Sand/Dirt Sand/Dirt Sand Sand Sand Sand Sand Sand Sand Sand	scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2 limit/base	NONE NORML NORML NEG NEG	NONE NORML NORML NEG NEG history1	NONE NORML NORML NEG NEG history2
Appearance S Odor S Emulsified Water S Free Water S FLUID PROPER Visc @ 100°C S GRAPHS Ferrous Alloys	scalar scalar scalar scalar SCALAR	*Visual *Visual *Visual *Visual method	NORML NORML >0.2 limit/base	NORML NORML NEG NEG current	NORML NORML NEG NEG history1	NORML NORML NEG NEG history2
Odor s Emulsified Water s Free Water s FLUID PROPER Visc @ 100°C c GRAPHS Ferrous Alloys	scalar scalar scalar TIES	*Visual *Visual *Visual method	NORML >0.2	NORML NEG NEG current	NORML NEG NEG history1	NORML NEG NEG history2
Emulsified Water Free Water FLUID PROPER Visc @ 100°C GRAPHS Ferrous Alloys	scalar scalar RTIES	*Visual *Visual method	>0.2 limit/base	NEG NEG current	NEG NEG history1	NEG NEG history2
Free Water s FLUID PROPER Visc @ 100°C G GRAPHS Ferrous Alloys 5	scalar RTIES	*Visual method	limit/base	NEG current	NEG history1	NEG history2
FLUID PROPER Visc @ 100°C GRAPHS Ferrous Alloys	RTIES	method		current	history1	history2
Visc @ 100°C GRAPHS Ferrous Alloys						
GRAPHS Ferrous Alloys	cSt	ASTM D445	12.00	13.6	▲ 14.4	▲ 14.4
Ferrous Alloys						
0 5						
5- iron						
5						
exercise UICKE						
5						
0						
5						
0	and a state of the second		The Officer			
	Apr25/23	7/23 -	6/23 -			
Jan 31/23 Feb 15/23 Mar 21/23	Apr2	May17/23	Jun16/23			
Non-ferrous Metals						
Copper						
8 - sessesses lead						
C C						



mac