

(TEMP) Walgreens - Yard Horse [Walgreens - Yard Horse] 136A81259 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

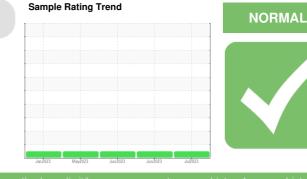
All component wear rates are normal.

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 Number Client Info PCA0091552 PCA0091523 PCA001152 PCA0091523 PCA0091523 PCA001152 PCA001153 PCA0110 PCA001153 PCA0110 PCA0110 <th>SAMPLE INFORI</th> <th>MATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 4600 4467 4329 Oil Age hrs Client Info 150 100 152 Oil Anged Client Info Oil Added Oil Added Oil Added Oil Added Sample Status Imit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Glycol WC Method >5 <1.0 <1.0 <1.0 Silver ppm ASTM D5185m<><10 21 16 9 Chromium ppm ASTM D5185m<><20 3 4 1 Silver ppm ASTM D5185m<><3 0 0 <1 Silver ppm ASTM D5185m<><1 0 <1 1	Sample Number		Client Info		PCA0091552	PCA0091523	PCA0091514
Oil Age hrs Client Info 150 100 152 Oil Changed Client Info Oil Added Oil Added Oil Added Oil Added Sample Status Imit/base current history1 NoRMAL NORMAL CONTAMINATION method Imit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Glycol WC Method >5 <1.0 <1.0 <1.0 Glycol WC Method >5 <1.0 <1.0 <1.0 WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m<>100 21 16 9 Chromium ppm ASTM D5185m<>20 3 4 1 1 Nickel ppm ASTM D5185m<>30 0 0 0 0 Bistory ppm ASTM D5185m<>20 3 41 1 1 Lead <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>28 Jul 2023</th> <th>28 Jun 2023</th> <th>02 Jun 2023</th>	Sample Date		Client Info		28 Jul 2023	28 Jun 2023	02 Jun 2023
Oil Added Sample StatusClient InfoOil Added NORMALOil Added NORMALOil Added NORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>5<1.0<1.0<1.0GlycolWC MethodNEGNEGNEGWEAR METALSmethodImit/basecurrenthistory1history2IronppmASTM D5185m>10021169ChromiumppmASTM D5185m>2011<1NickelppmASTM D5185m>2011<1NickelppmASTM D5185m>20341LeadppmASTM D5185m>20341LeadppmASTM D5185m>20341LeadppmASTM D5185m>20341CadmiumppmASTM D5185m>330<1<1<1TinppmASTM D5185m>15<10<1CadmiumppmASTM D5185m2010BoronppmASTM D5185m20100MolybdenumppmASTM D5185m95636062MagnesiumppmASTM D5185m95199210171077ZincppmASTM D5185m95199210171077ZincppmASTM D5185m9519921017	Machine Age	hrs	Client Info		4600	4467	4329
Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >4 2 0 3 Silver ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m >5 63 60 62 Mangaium	Oil Age	hrs	Client Info		150	100	152
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 16 9 Chromium ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 63 6	Oil Changed		Client Info		Oil Added	Oil Added	Oil Added
Fuel WC Method >5 <1.0	Sample Status				NORMAL	NORMAL	NORMAL
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 16 9 Chromium ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >20 3 0 0 <11 Nickel ppm ASTM D5185m >20 3 4 1 Silver ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Copper ppm ASTM D5185m >40 0 0 <1 Cadmium ppm ASTM D5185m >30 <1 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 <1 Cadmium ppm ASTM D5185m 0 63 60	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 21 16 9 Chromium ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >4 2 0 3 Titanium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >30 <1 <1 <1 Lead ppm ASTM D5185m >30 <1 <1 <1 Lead ppm ASTM D5185m >30 <1 <1 <1 Vanadium ppm ASTM D5185m >30 <1 <1 <1 Cadmium ppm ASTM D5185m >0 0 <1 0 Barium ppm ASTM D5185m 0 0 <1	Fuel		WC Method	>5	<1.0	<1.0	<1.0
Iron ppm ASTM D5185m >100 21 16 9 Chromium ppm ASTM D5185m >20 1 1 <1 Nickel ppm ASTM D5185m >4 2 0 3 Titanium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >330 <1 <1 <1 Tin ppm ASTM D5185m >330 <1 0 <1 Cadmium ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 <1 Boron ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 <1	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 1 1 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >4 2 0 3 Titanium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >15 <1 0 <1 Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 2 0 1 0 0 Boron ppm ASTM D5185m 0 <1 <1 <1 1 Magnaese ppm ASTM D5185m 50	Iron	ppm	ASTM D5185m	>100	21	16	9
Titanium ppm ASTM D5185m 0 0 <1	Chromium	ppm	ASTM D5185m	>20	1	1	<1
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 <1 <1 <1 Tin ppm ASTM D5185m >15 <1 0 <1 Vanadium ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 Boron ppm ASTM D5185m 0 63 60 62 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 1092 1	Nickel	ppm	ASTM D5185m	>4	2	0	3
Aluminum ppm ASTM D5185m >20 3 4 1 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 <1 <1 <1 Tin ppm ASTM D5185m >15 <1 0 <1 Vanadium ppm ASTM D5185m >15 <1 0 <1 Cadmium ppm ASTM D5185m 2 0 0 <1 Cadmium ppm ASTM D5185m 2 0 1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 1 0 Marganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 1992 101	Titanium	ppm	ASTM D5185m		0	0	<1
Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >330 <1	Aluminum	ppm	ASTM D5185m	>20	3	4	1
Tin ppm ASTM D5185m >15 <1	Lead	ppm	ASTM D5185m	>40	0	0	0
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Cadmium ppm ASTM D5185m 0 0 <1	Tin	ppm	ASTM D5185m	>15	<1	0	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 1 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 63 60 62 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 1092 1017 1077 Zinc ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron ppm ASTM D5185m 2 0 1 0 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 50 63 60 62 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 1050 1185 1040 1159 Phosphorus ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 2600 3726 3073 3776 Sulfur ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 <1 Potassium ppm ASTM D5185m	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 50 63 60 62 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 950 1185 1040 1159 Phosphorus ppm ASTM D5185m 1050 1185 1040 1159 Phosphorus ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 <1 INFRA-RED method	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 63 60 62 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	2	0	1	0
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 994 866 1041 Calcium ppm ASTM D5185m 1050 1185 1040 1159 Phosphorus ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 995 1345 1185 1339 Sulfur ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 <1 Potassium ppm ASTM D5185m >20 0 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844	Molybdenum	ppm	ASTM D5185m	50	63	60	62
Calcium ppm ASTM D5185m 1050 1185 1040 1159 Phosphorus ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 1180 1345 1185 1339 Sulfur ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 995 1092 1017 1077 Zinc ppm ASTM D5185m 1180 1345 1185 1339 Sulfur ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 <1	Magnesium	ppm	ASTM D5185m	950	994	866	1041
Zinc ppm ASTM D5185m 1180 1345 1185 1339 Sulfur ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 1 Potassium ppm ASTM D5185m >20 0 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	Calcium	ppm	ASTM D5185m	1050	1185	1040	1159
Sulfur ppm ASTM D5185m 2600 3726 3073 3776 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m >20 0 1 1 Potassium ppm ASTM D5185m >20 0 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	Phosphorus	ppm	ASTM D5185m	995	1092	1017	1077
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25654SodiumppmASTM D5185m301PotassiumppmASTM D5185m>2001<1INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.70.60.4NitrationAbs/cm*ASTM D7624>209.68.98.2	7						1000
Silicon ppm ASTM D5185m >25 6 5 4 Sodium ppm ASTM D5185m 3 0 1 Potassium ppm ASTM D5185m >20 0 1 <1	ZINC	ppm	ASTM D5185m	1180	1345	1185	1339
Sodium ppm ASTM D5185m 3 0 1 Potassium ppm ASTM D5185m >20 0 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	-						
Potassium ppm ASTM D5185m >20 0 1 <1	Sulfur	ppm	ASTM D5185m	2600	3726	3073	3776
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	Sulfur CONTAMINAN	ppm TS	ASTM D5185m method	2600 limit/base	3726 current	3073 history1	3776 history2
Soot % % *ASTM D7844 >3 0.7 0.6 0.4 Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	Sulfur CONTAMINAN Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	2600 limit/base	3726 current 6	3073 history1 5	3776 history2 4
Nitration Abs/cm *ASTM D7624 >20 9.6 8.9 8.2	Sulfur CONTAMINAN Silicon Sodium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	2600 limit/base >25	3726 current 6 3	3073 history1 5 0	3776 history2 4 1
	Sulfur CONTAMINAN Silicon Sodium Potassium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	2600 limit/base >25 >20	3726 current 6 3 0	3073 history1 5 0 1	3776 history2 4 1 <1
Sulfation Abs/.1mm *ASTM D7415 >30 19.8 20.1 18.7	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	2600 limit/base >25 >20 limit/base	3726 current 6 3 0 current	3073 history1 5 0 1 history1	3776 history2 4 1 <1 <1 history2
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	2600 limit/base >25 >20 limit/base >3	3726 current 6 3 0 current 0.7	3073 history1 5 0 1 1 history1 0.6	3776 history2 4 1 <1 <1 history2 0.4

16.9

7.2

FLUID DEGRADATION method limit/base

Base Number (BN) mg KOH/g ASTM D2896

Oxidation

Abs/.1mm *ASTM D7414 >25

14.8

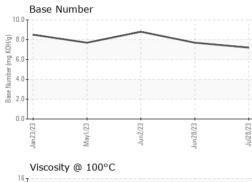
8.8

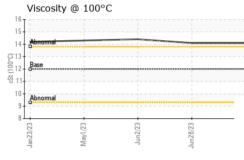
17.7

7.7

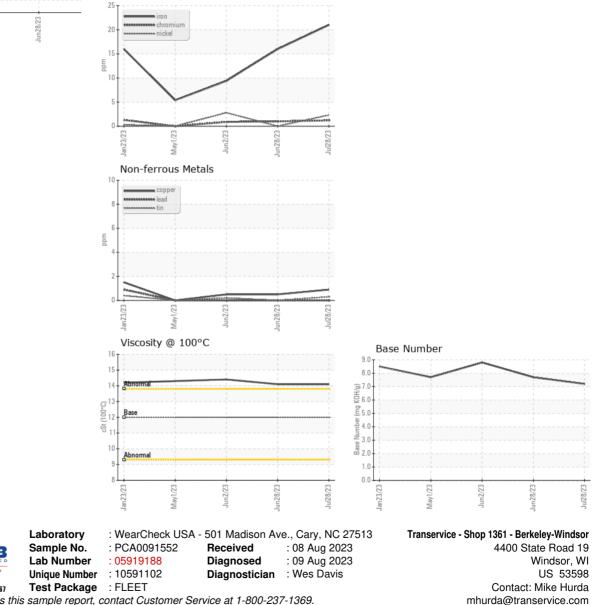


OIL ANALYSIS REPORT





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	14.1	14.1	14.4
GRAPHS						
Ferrous Alloys						





 Certificate 12307
 Test Package
 : FLEET

 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)

T: (608)846-2726

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