

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **1417**

Component Rear Transmission (Auto)

Fluid PETRO CANADA DuraDrive HD Synthetic 668 (24 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Trans oil interval over by 3003 kms.)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the fluid.

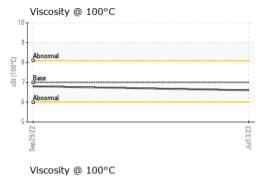
Fluid Condition

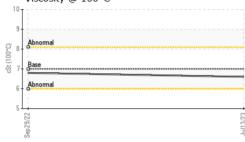
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

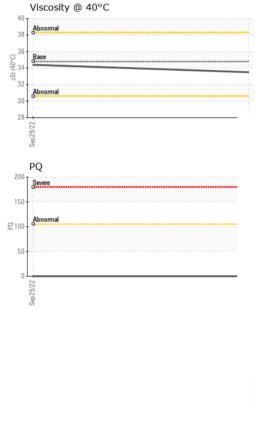
SAMPLE INFORMATION method imit/base current history1 history2 Sample Number Client Info 13 Jul 2023 29 Sep 2022 Sample Date Client Info 53003 49754 Oil Age kms Client Info 53003 49754 Oil Age kms Client Info Changed Sample Status Imit/base current history1 history2 PQ ASTM 08164* >105 0 Iron ppm ASTM 05185(m) >220 c1 0 Nickel ppm ASTM 05185(m) >22 c1 0 Silver ppm ASTM 05185(m) >55 21 8 Aluminum ppm ASTM 05185(m) >55 1 Copper ppm ASTM 05185(m) >5 1 Copper ppm </th <th></th> <th></th> <th></th> <th>Sep2022</th> <th>Jul2023</th> <th></th> <th></th>				Sep2022	Jul2023		
Sample Date Client Info 13 Jul 2023 29 Sep 2022 Machine Age kms Client Info 565488 512485 Oil Age kms Client Info 53003 49754 Oil Changed Client Info Changed Changed Sample Status Imit/base current NoRMAL WEAR METALS method Imit/base current history1 history2 PQ ASTM D5185(m) >2 <1 0 Nickel ppm ASTM D5185(m) >2 <1 0 Silver ppm ASTM D5185(m) >5 0 0 Aluminum ppm ASTM D5185(m) >5 2 <1 Autimony ppm ASTM D5185(m) >5 8 4 Copper ppm ASTM D5185(m) >5 1	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
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Oil Age kms Client Info 53003 49754 Oil Changed Client Info Changed Changed Sample Status Imit base current history1 history2 PQ ASTM D8184/ >105 0 0 Iron ppm ASTM D6185(m) >2 <1 0 Nickel ppm ASTM D6185(m) >5 <1 0 Nickel ppm ASTM D6185(m) >5 <1 0 Aluminum ppm ASTM D6185(m) >5 0 0 Aluminum ppm ASTM D6185(m) >5 2 <1 Copper ppm ASTM D6185(m) >5 1 <1 Antimony ppm ASTM D5185(m) 0 0 Beryllium ppm ASTM D5185(m) 0 0 Handi		kms	Client Info		565488		
Oil Changed Sample Status Client Info Changed NORMAL Changed NORMAL WEAR METALS method limit/base current history1 history2 PQ ASTM 08184' >105 0 0 Iron ppm ASTM 08184' >230 52 33 Nickel ppm ASTM 08185(m) >2 <1 0 Nickel ppm ASTM 08185(m) >5 <1 0 Aluminum ppm ASTM 08185(m) >5 0 0 Aluminum ppm ASTM 05185(m) >5 2 <1 Aluminum ppm ASTM 05185(m) >5 1 <1 Aluminum ppm ASTM 05185(m) >5 1 <1 Aluminum ppm ASTM 05185(m) >5 1 <1 Aluminum ppm ASTM 05185(m) >5 1 <th>•</th> <th>kms</th> <th>Client Info</th> <th></th> <th>53003</th> <th>49754</th> <th></th>	•	kms	Client Info		53003	49754	
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Nickel ppm ASTM D5185(m) >5 <1	Iron	ppm	ASTM D5185(m)	>230	52	33	
Nickel ppm ASTM D5185(m) >5 <1	Chromium		ASTM D5185(m)	>2	<1	0	
Titanium ppm ASTM D5185(m) >2 <1	Nickel		ASTM D5185(m)	>5	<1	0	
Silver ppm ASTM D5185(m) >5 0 0 Aluminum ppm ASTM D5185(m) >65 21 8 Lead ppm ASTM D5185(m) >55 2 <1 Copper ppm ASTM D5185(m) >85 8 4 Tin ppm ASTM D5185(m) 0 <1 Antimony ppm ASTM D5185(m) 0 <1 Vanadium ppm ASTM D5185(m) 0 0 Vanadium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADD1TIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 78 58 65 Magnaese ppm ASTM D5185(m) 0 1 Magnesiu	Titanium	ppm	ASTM D5185(m)	>2	<1	0	
Aluminum ppm ASTM D5185(m) >65 21 8 Lead ppm ASTM D5185(m) >55 2 <1 Copper ppm ASTM D5185(m) >85 8 4 Tin ppm ASTM D5185(m) >5 1 <1 Antimony ppm ASTM D5185(m) >5 1 <1 Vanadium ppm ASTM D5185(m) 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method imit/base current history1 history2 Boron ppm ASTM D5185(m) 78 58 65 Magnaese ppm ASTM D5185(m) 0 11 -1 Magnesium ppm ASTM D5185(m) 0<	Silver		ASTM D5185(m)	>5	0	0	
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Tin ppm ASTM D5185(m) >5 1 <1	Copper		ASTM D5185(m)	>85	8	4	
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BerylliumppmASTM D5185(m)00CadmiumppmASTM D5185(m)00ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185(m)785865BariumppmASTM D5185(m)0<1	Antimony	ppm	ASTM D5185(m)		0	<1	
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Boron ppm ASTM D5185(m) 78 58 65 Barium ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 <1 <1 Manganese ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 0 1 <1 Calcium ppm ASTM D5185(m) 0 1 <1 Calcium ppm ASTM D5185(m) 113 111 104 Calcium ppm ASTM D5185(m) 222 227 227 Zinc ppm ASTM D5185(m) 1326 1640 1789 Sulfur ppm ASTM D5185(m) 1326 1640 1789 Lithium ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) <td< th=""><th>Cadmium</th><th>ppm</th><th>ASTM D5185(m)</th><th></th><th>0</th><th>0</th><th></th></td<>	Cadmium	ppm	ASTM D5185(m)		0	0	
Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 <1 <1 Manganese ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 0 1 <1 Calcium ppm ASTM D5185(m) 0 1 <1 Calcium ppm ASTM D5185(m) 0 1 <1 Calcium ppm ASTM D5185(m) 133 111 104 Phosphorus ppm ASTM D5185(m) 222 227 227 Zinc ppm ASTM D5185(m) 222 227 227 Sulfur ppm ASTM D5185(m) 1326 1640 1789 Lithium ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) >20 13 <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 0 <1	Boron	ppm	ASTM D5185(m)	78	58	65	
Manganese ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)		0	0	
Magnesium ppm ASTM D5185(m) 0 1 <1	Molybdenum	ppm	ASTM D5185(m)	0			
Column ppm ASTM D5185(m) 113 111 104 Phosphorus ppm ASTM D5185(m) 222 227 227 Zinc ppm ASTM D5185(m) 222 227 227 Zinc ppm ASTM D5185(m) 222 227 227 Sulfur ppm ASTM D5185(m) 1326 1640 1789 Lithium ppm ASTM D5185(m) 1326 1640 1789 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) >20 1 2 FLUID DEGRADATION method limit/base current history1 history2	Manganese			0	<1	<1	
Phosphorus ppm ASTM D5185(m) 222 227 227 Zinc ppm ASTM D5185(m) 8 7 Sulfur ppm ASTM D5185(m) 1326 1640 1789 Lithium ppm ASTM D5185(m) 1326 current history1 history2 Solicon ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) >20 13 14 Potassium ppm ASTM D5185(m) >20 1 2 FLUID DEGRADATION method limit/base current history1 history2	manganoso	ppm	. /	0			
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Sulfur ppm ASTM D5185(m) 1326 1640 1789 Lithium ppm ASTM D5185(m) 1326 1640 1789 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) >20 13 14 Potassium ppm ASTM D5185(m) >20 1 2 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185(m) ASTM D5185(m)	0	<1 1	<1 <1	
LithiumppmASTM D5185(m)<1	Magnesium Calcium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113	<1 1 111	<1 <1 104	
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Silicon ppm ASTM D5185(m) >20 12 6 Sodium ppm ASTM D5185(m) >20 13 14 Potassium ppm ASTM D5185(m) >20 1 2 FLUID DEGRADATION method limit/base current history1 history2	Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222	<1 1 111 227 8	<1 <1 104 227 7	
SodiumppmASTM D5185(m)1314PotassiumppmASTM D5185(m)>2012FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222	<1 1 111 227 8 1640	<1 <1 104 227 7 1789	
SodiumppmASTM D5185(m)1314PotassiumppmASTM D5185(m)>2012FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222 1326	<1 1 111 227 8 1640 <1	<1 <1 104 227 7 1789 <1	
PotassiumppmASTM D5185(m)>2012FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222 1326 Jimit/base	<1 1 111 227 8 1640 <1 current	<1 <1 104 227 7 1789 <1 history1	
	Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Method ASTM D5185(m)	0 113 222 1326 Jimit/base	<1 1 111 227 8 1640 <1 current 12	<1 <1 104 227 7 1789 <1 history1 6	 history2
Acid Number (AN) mg KOH/g ASTM D974* 1.4 1.23 1.35	Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222 1326 limit/base >20	<1 1 1 111 227 8 1640 <1 current 12 13	<1 <1 104 227 7 1789 <1 history1 6 14	 history2
	Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 113 222 1326 1326 limit/base >20	<1 1 1 111 227 8 1640 <1 current 12 13 1	<1 <1 104 227 7 1789 <1 history1 6 14 2	 history2



OIL ANALYSIS REPORT







White MetalscalarVisual*NONENONENONEYellow MetalscalarVisual*NONENONENONEPrecipitatescalarVisual*NONENONENONESiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORML	
PrecipitatescalarVisual*NONENONENONESiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORML	
SiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORML	
SiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORML	
DebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORML	
Sand/DirtscalarVisual*NONENONEVLITEAppearancescalarVisual*NORMLNORMLNORML	
Appearance scalar Visual* NORML NORML NORML	
Ouor scalar visual NORIVIL NORIVIL NORIVIL	
Emulsified Water scalar Visual* >0.1 NEG NEG	
Free WaterscalarVisual*NEGNEG	
FLUID PROPERTIES method limit/base current history	1 history2
Visc @ 40°C cSt ASTM D7279(m) 34.8 33.5 34.4	
Visc @ 100°C cSt ASTM D7279(m) 7.0 6.6 6.8	
Viscosity Index (VI) Scale ASTM D2270* 167 156 160	
SAMPLE IMAGES method limit/base current history	1 history2
Color	no image
Bottom	no image
GRAPHS	
Ferrous Alloys PQ	
200 - 200 - 100 Severe	
D - 180 - Overland	
160+	
140 -	
E 120+	
Abnormal Abnormal	
Non-ferrous Metals	
copper 60-	
40-	
20-	
Sep 29/22	C C
Sep 2 Sep 2	-
Viscosity @ 40°C	
Viscosity @ 40°C Acid Number	
Aciu Nulliber	
Abnormal Base Base Base Base Base Base Base Base	2 2 7
Abnormal Base Abnormal Abnorma	
Abnormal Abnormal Control 10 Control 10	Metrobus Trans
Abnormal Image: Constraint of the second	Metrobus Trans 25 Messenger Driv
Abnormal Image: Comparison of the second	Metrobus Trans
Abnormal Abnormal Image: Constraint of the second sec	Metrobus Trans 25 Messenger Driv St. John`s, N

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CALA

ISO 17025:2017 Accredited Laboratory

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Laboratory

Sample No.

Lab Number

Unique Number Test Package

T:

F: