

OIL ANALYSIS REPORT

Area SCHTRUCK 6352 [SCHTRUCK]

PETRO CANADA DURON SHP 15W40 (--- 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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0007012	SBP0005632	SBP0004395
Sample Date		Client Info		05 Apr 2024	24 Oct 2023	05 Jun 2023
Machine Age	mls	Client Info		487591	451104	414326
Oil Age	mls	Client Info		36487	36778	38515
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	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 METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	23	12	14
Chromium	ppm	ASTM D5185m	>5	2	1	1
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	8	5	4
Lead	ppm	ASTM D5185m	>30	<1	<1	0
Copper	ppm	ASTM D5185m	>150	8	5	5
Tin	ppm	ASTM D5185m	>5	2	<1	<1
Vanadium	ppm	ASTM D5185m		- <1	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
	le le					-
ADDITIVES		method			historv1	history2
ADDITIVES	nnm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	<1	21
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	0 0	<1 0	21 2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 66	<1 0 60	21 2 43
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 66 1	<1 0 60 0	21 2 43 <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	0 0 66 1 1070	<1 0 60 0 901	21 2 43 <1 572
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	0 0 66 1 1070 1233	<1 0 60 0 901 1165	21 2 43 <1 572 1667
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	0 0 66 1 1070 1233 1112	<1 0 60 0 901 1165 993	21 2 43 <1 572 1667 768
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	0 0 66 1 1070 1233	<1 0 60 0 901 1165	21 2 43 <1 572 1667
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	0 0 66 1 1070 1233 1112 1388	<1 0 60 0 901 1165 993 1227	21 2 43 <1 572 1667 768 952
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 0 1010 1070 1150 1270 2060	0 0 66 1 1070 1233 1112 1388 3004	<1 0 60 0 901 1165 993 1227 3091	21 2 43 <1 572 1667 768 952 2362
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	0 0 66 1 1070 1233 1112 1388 3004 current	<1 0 60 0 901 1165 993 1227 3091 history1	21 2 43 <1 572 1667 768 952 2362 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	0 0 66 1 1070 1233 1112 1388 3004 current 6	<1 0 60 0 901 1165 993 1227 3091 history1 4	21 2 43 <1 572 1667 768 952 2362 kistory2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	0 0 66 1 1070 1233 1112 1388 3004 <u>current</u> 6 3	<1 0 60 0 901 1165 993 1227 3091 history1 4 1	21 2 43 <1 572 1667 768 952 2362 2362 history2 6 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	0 0 66 1 1070 1233 1112 1388 3004 <u>current</u> 6 3 3 3	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2	21 2 43 <1 572 1667 768 952 2362 bistory2 6 0 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >20	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 3 	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 	21 2 43 <1 572 1667 768 952 2362 2362 history2 6 0 2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i>	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 3 <i>current</i> 0.7	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 history1 0.7	21 2 43 <1 572 1667 768 952 2362 history2 6 0 2 2 history2 0.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i>	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 3 	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 history1	21 2 43 <1 572 1667 768 952 2362 history2 6 0 2 2 bistory2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine 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 2060 2060 220 20 20 20 20 20 20 20 20 20 20 20 2	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 3 <i>current</i> 0.7 9.1	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 history1 0.7 8.9	21 2 43 <1 572 1667 768 952 2362 history2 6 0 2 2 history2 0.6 10.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine 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 2060 200 200 20 20 320 320 320 320 33 220 33	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 0 4 <i>current</i> 0.7 9.1 22.0 <i>current</i>	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 history1 0.7 8.9 21.5	21 2 43 <1 572 1667 768 952 2362 history2 6 0 2 history2 0.6 10.1 23.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Chlorine INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	0 0 66 1 1070 1233 1112 1388 3004 <i>current</i> 6 3 3 <i>current</i> 0.7 9.1 22.0	<1 0 60 0 901 1165 993 1227 3091 history1 4 1 2 history1 0.7 8.9 21.5 history1	21 2 43 <1 572 1667 768 952 2362 2362 history2 6 0 2 2 history2 0.6 10.1 23.7 history2

Submitted By: CASEY WILKIE



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Mar30/21

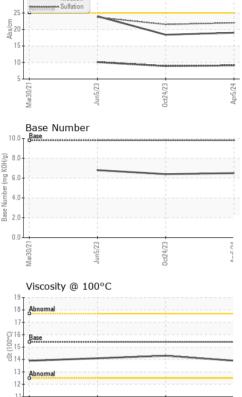
FT-IR (Direct Trend)

Oxidation

litratio

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
uctz+//23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Ap	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.3	14.1
	GRAPHS						
	Ferrous Alloys						
0ct24/23	25 iron						
1 D I	20 - chromium						
<							
	15- E						
	10						
	5-						
	0		a a canada da ana da mana da ana d				
	Mar30/21 Jun5/23		0ct24/23	Apr5/24			
	-		Oct	Ar			
*	Non-ferrous Metal	S					
101	10 copper						
5	8 - sessessesses lead			/			
	- 6						



0ct24/23 Apr5/24 -Mar30/21 Jun5/23 0ct24/23 Mar30/21 **SCHMIDT TRANSPORTATION - 605449** Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : SBP0007012 108 E Bay Road Received : 09 Apr 2024 Lab Number : 06143626 Tested : 10 Apr 2024 Plattsmouth, NE US 68048 Unique Number : 10968434 Diagnosed : 10 Apr 2024 - Wes Davis Test Package : FLEET Contact: NICK DOTY Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. doty@liquidtrucking.com T: (402)949-9398 * - 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)

Report Id: SCHPLA [WUSCAR] 06143626 (Generated: 04/10/2024 13:42:32) Rev: 1

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Mar30

19

18 17

(100°C)

5 14

13 Abno 12 11-

Viscosity @ 100°C

Submitted By: CASEY WILKIE

Base Number

10.0

8 (mg KOH/g)

6 | umber

4 (Base

0.0

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Apr5/24