

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



### Area SCHTRUCK Machine Id 6354 [SCHTRUCK]

Diesel Engine

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.

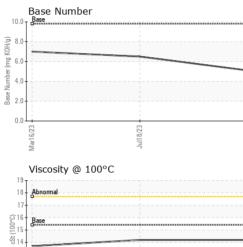
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0005895	SBP0004723	SBP0004181
Sample Date		Client Info		15 Nov 2023	18 Jul 2023	16 Mar 2023
Machine Age	mls	Client Info		385948	349022	310028
Oil Age	mls	Client Info		36926	38994	38003
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	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	15	21	25
Chromium	ppm	ASTM D5185m	>5	2	3	3
Nickel	ppm	ASTM D5185m	>2	1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	9	16	19
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	9	9	6
Tin	ppm	ASTM D5185m	>5	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	nnm	ACTM DE10Em		•		0
Caumum	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	method	limit/base	0 current	0 history1	0 history2
	ppm	method	limit/base	-	-	-
ADDITIVES		method ASTM D5185m		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 3	history1 1	history2 30
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 3 0	history1 1 0	history2 30 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 3 0 58	history1 1 0 63	history2 30 0 47
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current           3           0           58           <1	history1 1 0 63 <1	history2 30 0 47 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 3 0 58 <1 929	history1 1 0 63 <1 981	history2 30 0 47 <1 563
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	current           3           0           58           <1           929           1081	history1 1 0 63 <1 981 1304	history2 30 0 47 <1 563 1803
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	current           3           0           58           <1           929           1081           1074	history1 1 0 63 <1 981 1304 1015	history2 30 0 47 <1 563 1803 776
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current           3           0           58           <1           929           1081           1074           1265	history1 1 0 63 <1 981 1304 1015 1258	history2 30 0 47 <1 563 1803 776 950
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 3 0 58 <1 929 1081 1074 1265 2529	history1 1 0 63 <1 981 1304 1015 1258 3127	history2           30           0           47           <1           563           1803           776           950           3055
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 00 00 1010 1070 1150 1270 2060	current           3           0           58           <1           929           1081           1074           1265           2529           current	history1 1 0 63 <1 981 1304 1015 1258 3127 history1	history2         30         0         47         <1         563         1803         776         950         3055         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base	current           3           0           58           <1           929           1081           1074           1265           2529           current           6	history1           1           0           63           <1           981           1304           1015           1258           3127           history1           4	history2           30           0           47           <1           563           1803           776           950           3055           history2           8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3	history1           1           0           63           <1           981           1304           1015           1258           3127           history1           4           3	history2           30           0           47           <1           563           1803           776           950           3055           history2           8           5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <b>Jimit/base</b> >20	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3           9	history1         1         0         63         <1         981         1304         1015         1258         3127         history1         4         3         15         history1         0.2	history2         30         0         47         <1         563         1803         776         950         3055         history2         8         5         19         history2         0.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <b>Imit/base</b> >20 <b>S</b>	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3           9           current	history1         1         0         63         <1         981         1304         1015         1258         3127         history1         4         3         15         history1	history2         30         0         47         <1         563         1803         776         950         3055         history2         8         5         19         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 20 20 20	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3           9           current           0.7	history1         1         0         63         <1         981         1304         1015         1258         3127         history1         4         3         15         history1         0.2	history2         30         0         47         <1         563         1803         776         950         3055         history2         8         5         19         history2         0.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >3 >20	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3           9           current           0.7           10.0	history1         1         0         63         <1         981         1304         1015         1258         3127         history1         4         3         15         history1         0.2         9.2	history2           30           0           47           <1           563           1803           776           950           3055           history2           8           5           19           history2           0.6           11.0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >3 >30	current           3           0           58           <1           929           1081           1074           1265           2529           current           6           3           9           current           0.7           10.0           23.3	history1         1         0         63         <1         981         1304         1015         1258         3127         history1         4         3         15         history1         0.2         9.2         21.2	history2         30         0         47         <1         563         1803         776         950         3055         history2         8         5         19         history2         0.6         11.0         24.1



Base

13 Abnormal 12 11 Mar16/23

# **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		NONE	NONE	NONE	NONE		
8/23		scalar	*Visual	NORML	NORML	NORML	NORML		
Jul 8/23	Appearance Odor	scalar		NORML	NORML	NORML	NORML		
)°C	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG		
J-C	Free Water	scalar	*Visual		NEG	NEG	NEG		
	FLUID PROPER	TIES	method	limit/base	current	history1	history2		
	Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.2	13.7		
	GRAPHS								
	Ferrous Alloys								
	25 T								
Jul18/23	20 - chromium								
Ja L	201 usessesses nickel								
	15- E								
	Ē. 10								
	5-								
	0		******	Charles Charles					
	Mar16,23	Jul18/23		Nov15/23					
	Mar	Jul		Nov					
	Non-ferrous Meta	als							
	10 copper	1		1					
	8 - Research lead								
	E C								
	4-								
	2								
	0	·····		~					
	ar16/23	Jul18/23		v15/23					
	≅	-		Nc					
	VISCOSITY @ 100°	Viscosity @ 100°C							
	18 - Abnormal			10.0	Base				
	17				)				
	© <sup>16</sup> -Base			HOY B 6.0					
	0-16 Base 115 314			L L					
	<sup>63</sup> 14-				•				
	13 - Abnormal			2.0					
	12								
	11	23		0.0		23+	23 +		
	Mar16/23	Jul18/23		Nov15/23	Mar16/23	Jul18/23	Nov15/23		
Laborator Sample Na Lab Numb Unique Num Test Pack To discuss this sample rec	y : WearCheck USA - o. : SBP0005895 per : 06017090 nber : 10756234 age : FLEET	: WearCheck USA - 501 Madison Ave., Cary, NC 27513 SCHMIDT TRANS : SBP0005895 Received : 24 Nov 2023 : 06017090 Diagnosed : 28 Nov 2023 r : 10756234 Diagnostician : Wes Davis : FLEET							
* - Denotes test methods the Statements of conformity to	hat are outside of the ISO	17025 sco	pe of accred	litation.	JCGM 106:2012)		uidtrucking.com (402)949-9398 F:		

Submitted By: CASEY WILKIE