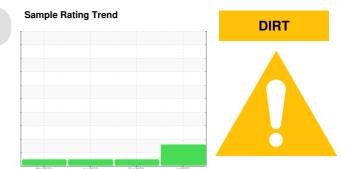


PROBLEM SUMMARY



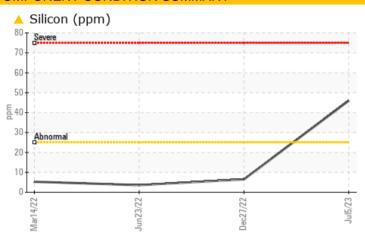


Machine Id **928035** Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status				ABNORMAL	NORMAL	NORMAL	
Silicon	ppm	ASTM D5185m	>25	46	6	4	

Customer Id: GFL935 Sample No.: GFL0082501 Lab Number: 05895516 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid			?	Oil and filter change at the time of sampling has been noted.
Change Filter			?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

27 Dec 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



23 Jun 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



14 Mar 2022 Diag: Wes Davis

NORMAL



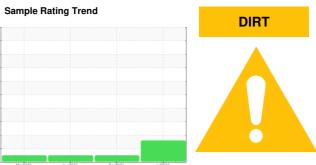
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

DT





928035
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

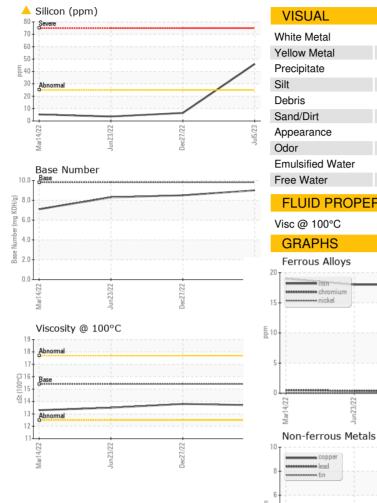
Fluid Condition

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

N 3HP 15W40 (- GAL)	Mar202	2 Jun 2022	Dec2022 J	ul2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0082501	GFL0062145	GFL0048996
Sample Date		Client Info		05 Jul 2023	27 Dec 2022	23 Jun 2022
Machine Age	hrs	Client Info		34548	34127	33641
Oil Age	hrs	Client Info		620	486	623
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	16	18	18
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	<1	<1	1
Copper	ppm	ASTM D5185m	>330	1	1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	6	9
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	63	67	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	922	994	880
Calcium	ppm	ASTM D5185m	1070	1089	1148	1060
Phosphorus	ppm	ASTM D5185m	1150	1013	1106	964
Zinc	ppm	ASTM D5185m	1270	1194	1294	1152
Sulfur	ppm	ASTM D5185m	2060	3033	3703	3359
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ 46	6	4
Sodium	ppm	ASTM D5185m		<1	5	4
Potassium	ppm	ASTM D5185m	>20	2	0	0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.5	0.6	0.8
Nitration	Abs/cm	*ASTM D7624		8.5	9.8	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	20.0	22.2
FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	16.3	19.0
Base Number (BN)	mg KOH/g	ASTM D2896		9.0		8.3
Dase Mulliber (BIN)	ilig KOH/g	42 LINI D5886	9.0	9.0	8.5	0.3

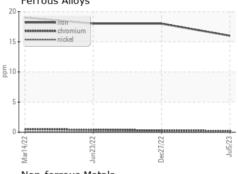


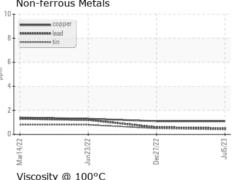
OIL ANALYSIS REPORT

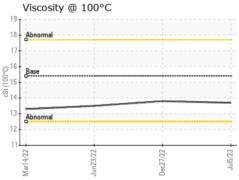


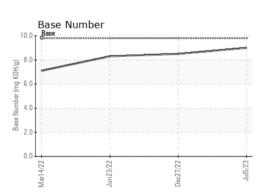
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

FLUID PHOP	ELLIES	method	IIIIII/Dase	Current	HISTORY	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.8	13.5











Laboratory Sample No. Lab Number Test Package : FLEET

Unique Number : 10551326

: GFL0082501 : 05895516

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jul 2023 Diagnosed : 13 Jul 2023 Diagnostician : Doug Bogart

GFL Environmental - 935 - Omro HC 250 Alder Avenue

Omro, WI US 54963 Contact: Tim Kieffer tim.kieffer@gflenv.com T: (608)219-0288

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)

Report Id: GFL935 [WUSCAR] 05895516 (Generated: 07/13/2023 23:33:35) Rev: 1