

OIL ANALYSIS REPORT

Sample Rating Trend



429022-1227

Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sample only) $% \label{eq:commutative}$

Wear

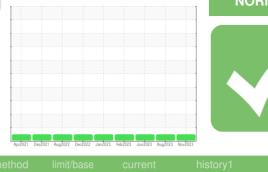
All component wear rates are normal.

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.

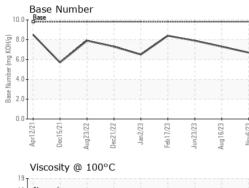


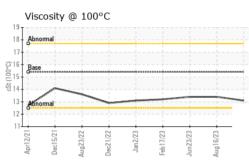
		Apr2021 De	c2021 Aug2022 Dec2022	Jan2023 Feb2023 Jun2023 Aug20	123 Nov2023	
SAMPLE INFOR	RMATIO	N method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0094854	GFL0077544	GFL0077520
Sample Date		Client Info		06 Nov 2023	16 Aug 2023	23 Jun 2023
Machine Age	hrs	Client Info		9661	9245	9147
Oil Age	hrs	Client Info		416	8796	448
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR META	LS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	37	106	100
Chromium	ppm	ASTM D5185m	>20	<1	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	6	4
Lead	ppm	ASTM D5185m	>40	5	6	3
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	1	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	65	65	65
Manganese	ppm	ASTM D5185m	0	0	1	1
Magnesium	ppm	ASTM D5185m	1010	955	1010	1013
Calcium	ppm	ASTM D5185m	1070	1100	1156	1126
Phosphorus	ppm	ASTM D5185m	1150	915	1012	1078
Zinc	ppm	ASTM D5185m	1270	1248	1278	1361
Sulfur	ppm	ASTM D5185m	2060	3018	3354	3673
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	5	4
Sodium	ppm	ASTM D5185m		2	5	4
Potassium	ppm	ASTM D5185m	>20	11	10	6
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	1	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	1	1
Nitration	Abs/cm	*ASTM D7624	>20	10.5	10.9	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	22.0	22.7
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	17.4	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	7.3	7.9



OIL ANALYSIS REPORT





rellow Metalscalar*VisualNONENONENONENONEtrecipitatescalar*VisualNONENONENONENONEsiltscalar*VisualNONENONENONENONEbebrisscalar*VisualNONENONENONENONEand/Dirtscalar*VisualNONENONENONENONEoppearancescalar*VisualNORMLNORMLNORMLNORMLodorscalar*VisualNORMLNORMLNORMLNORMLodorscalar*VisualNORMLNORMLNORMLNORMLodorscalar*VisualNORMLNORMLNORMLNORMLodorscalar*Visual>0.2NEGNree Waterscalar*VisualNEGNEGNFLUID PROPERTIESmethodlimit/basecurrenthistory1	JONE JONE JONE JONE
recipitate scalar 'Visual NONE NONE NONE NONE NONE NONE ADDRESSION Scalar 'Visual NONE NONE NONE NONE NONE NONE NONE NON	IONE
ilit scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	
nebris scalar *Visual NONE NORML NORML NORMIL NORMIL NORMIL NORMUL NORMUL NORMUL NORMUL NOR NOR NORMUL NOR None None None None None None Nonerror Nonerror Strand for for forro<	IONE
and/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	
ppearance scalar "Visual NORML	IONE
blor scalar Visual NORML NORML NORML NORML NORML N inulisified Water scalar Visual >0.2 NEG NEG N ree Water scalar Visual NEG NEG NEG NEG FLUID PROPERTIES method imit/base current history1 fisc @ 100°C cSt ASTM D445 15.4 13.1 13.4 1 GRAPHS Ferrous Alloys Ferrous Alloys CECTION CONTRACT CONTR	IONE
mulsified Water scalar 'Visual >0.2 NEG NEG N ree Water scalar 'Visual NEG NEG N FLUID PROPERTIES method limit/base current history1 Fisc @ 100°C cSt ASTM D445 15.4 13.1 13.4 1 GRAPHS Ferrous Alloys	IORML
ree Water scalar *Visual NEG NEG N FLUID PROPERTIES method limit/base current history1 risc @ 100°C cSt ASTM D445 15.4 13.1 13.4 1 GRAPHS Ferrous Alloys	IORML
FLUID PROPERTIES method timit/base current history1 isc @ 100°C cSt ASTM D445 15.4 13.1 13.4 1 GRAPHS Ferrous Alloys Imid/Image: Contract of the second of the se	IEG
fisc @ 100°C cSt ASTM D445 15.4 13.1 13.4 1 GRAPHS Ferrous Alloys	IEG
GRAPHS Ferrous Alloys	history2
Ferrous Alloys	3.4
hon-ferrous Metals Viscosity @ 100°C therma	
http://www.initedianeers.org/line/files/fi	
Non-ferrous Metals	
Viscosity @ 100°C Abnomal	
Viscosity @ 100°C Abnomal	
Viscosity @ 100°C Abnormal	
Abnormal	
Abnormal	
Base g 6.0	
4.0	
Abnorma 2.0	
Apri 2/21 ung 23/22 Jec 21/22 Jec 21/22 tun 23/23 Nov6/23 Nov6/23 Jen 2/22 Jec 21/22 Jec 21/22 Jen 2/23	

8 De Aug Ee Dec Aug Dec Feb h Dec J Aug : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 625 - Harrison Hauling Laboratory Sample No. : GFL0094854 Received : 08 Nov 2023 4102 Industrial Pkwy Lab Number : 06002095 Diagnosed : 10 Nov 2023 Harrison, MI US 48625 Unique Number : 10735857 Diagnostician : Angela Borella Test Package : FLEET Contact: Glenda Standen Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. gstanden@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)