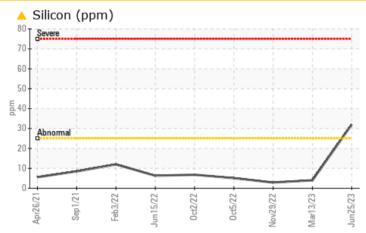
PROBLEM SUMMARY



Machine Id 926022-547

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

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC	C TEST	RESULT	S			
Sample Status				ABNORMAL	NORMAL	NORMAL
Silicon	ppm	ASTM D5185m	>25	<u> </u>	4	3

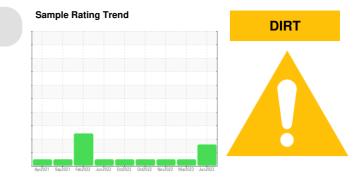
Customer Id: GFL626 Sample No.: GFL0062188 Lab Number: 05886463 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 don.b505@comcast.net

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



There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

13 Mar 2023 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.

29 Nov 2022 Diag: Wes Davis

of the oil is suitable for further service.



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





05 Oct 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.

contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition







926022-547

OIL ANALYSIS REPORT

Sample Rating Trend



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

DIAGNOSIS

Machine Id

Component Diesel Engine

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal.

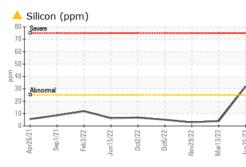
Fluid Condition

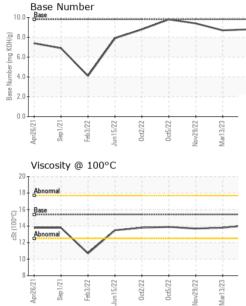
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0062188	GFL0062239	GFL0062172
Sample Date		Client Info		25 Jun 2023	13 Mar 2023	29 Nov 2022
Machine Age	hrs	Client Info		16722	16458	15758
Oil Age	hrs	Client Info		580	700	381
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	3	12	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	۰ <1	0	0
Aluminum	ppm	ASTM D5185m	>20	1	3	<1
Lead	ppm	ASTM D5185m	>40	0	3	2
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm		>15	0	<1	0
Vanadium	ppm	ASTM D5185m	210	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		and the state	11		Internet and	biotom/ O
ADDITIVES		method	limit/base	current	nistory i	TISION 2
	ppm	method	limit/base		history 1	history 2
Boron	ppm	ASTM D5185m	0	7	8	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	7 0	8 0	6 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	7 0 57	8 0 63	6 0 62
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	7 0 57 <1	8 0 63 <1	6 0 62 <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	7 0 57 <1 935	8 0 63 <1 877	6 0 62 <1 899
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	7 0 57 <1 935 1069	8 0 63 <1 877 1169	6 0 62 <1 899 1088
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	7 0 57 <1 935 1069 1010	8 0 63 <1 877 1169 1015	6 0 62 <1 899 1088 962
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	7 0 57 <1 935 1069	8 0 63 <1 877 1169	6 0 62 <1 899 1088
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 2060	7 0 57 <1 935 1069 1010 1251 3760	8 0 63 <1 877 1169 1015 1198 2807	6 0 62 <1 899 1088 962 1179 3385
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m 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	7 0 57 <1 935 1069 1010 1251 3760 current	8 0 63 <1 877 1169 1015 1198 2807 history 1	6 0 62 <1 899 1088 962 1179 3385 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm 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 0 1010 1070 1150 1270 2060	7 0 57 <1 935 1069 1010 1251 3760 current 32	8 0 63 <1 877 1169 1015 1198 2807 history 1 4	6 0 62 <1 899 1088 962 1179 3385 history 2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m 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	7 0 57 <1 935 1069 1010 1251 3760 current	8 0 63 <1 877 1169 1015 1198 2807 history 1	6 0 62 <1 899 1088 962 1179 3385 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	7 0 57 <1 935 1069 1010 1251 3760 current ▲ 32 <1 <1	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	7 0 57 <1 935 1069 1010 1251 3760 current 32 <1 <1 <1	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3	7 0 57 <1 935 1069 1010 1251 3760 current 32 <1 <1 <1 <1	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1 0.5	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	7 0 57 <1 935 1069 1010 1251 3760 current ▲ 32 <1 <1 <1 current 0.1 4.6	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium 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 limit/base >25 >20 limit/base >3 >20	7 0 57 <1 935 1069 1010 1251 3760 current 32 <1 <1 <1 <1 current 0.1 4.6 18.0	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1 0.5 8.0 20.3	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2 0.3 8.3 20.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 imit/base >3 >20 >30 limit/base	7 0 57 <1 935 1069 1010 1251 3760 current ▲ 32 <1 <1 <1 current 0.1 4.6 18.0 current	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1 0.5 8.0 20.3 history 1	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2 0.3 8.3 20.9 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium 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 Iimit/base >25 S S S S S S S S S S S S S S S S S S S	7 0 57 <1 935 1069 1010 1251 3760 current 32 <1 <1 <1 <1 current 0.1 4.6 18.0	8 0 63 <1 877 1169 1015 1198 2807 history 1 4 5 2 2 history 1 0.5 8.0 20.3	6 0 62 <1 899 1088 962 1179 3385 history 2 3 2 0 history 2 0.3 8.3 20.9



OIL ANALYSIS REPORT





	VISUAL					history 1	history
	-		method	limit/base	current		
	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
Mar13/23	Appearance Odor	scalar	*Visual	NORML	NORML	NORML	NORML
ž .	0.00	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	history 1	history
	Visc @ 100°C	cSt	ASTM D445	15.4	14.1	13.8	13.7
	GRAPHS						
	Ferrous Alloys						
/23	35 - iron						
Mar13/23	30 - nickel						
	25-						
	툡 20-						
	15						
	10	\wedge					
	10 5	\land	\square				
		22	3 2 4	33			
		0ct2/22	uce)(12 2029/22 ar13/23	in25/23			
	Apr26/21 Sep1/21 Feb3/22		Nov29/22 Mar13/23	Jun25/23			
/23			Nov29/22 Mar13/23	Jun25/23			
Mar13/23	Non-ferrous Metals		Nov29/22 Mart 3/23	Jun 25,223			
Mar13/23	Non-ferrous Metals		Nov29/22 Mar13/23	Jun25/23			
Mar13/23	Non-ferrous Metals		UCEJ.L2 Nov29/22 Mar13/23	10125223			
Mar13/23	STORE COPPER STORE COPPER Non-ferrous Metals CCCC Copper LICI (des CCCCC Copper LICI (des CCCCCC Copper LICI (des CCCCC) (des CCCCCCCCCCC) (des CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		22/23/22 22/23/22 Mart 3/23	cz/szung			
Marta223	Source State		13/13/2000 Part of the second	Jun25/23			
Mar13/23	STORE COPPER STORE COPPER Non-ferrous Metals CCCC Copper LICI (des CCCCC Copper LICI (des CCCCCC Copper LICI (des CCCCC) (des CCCCCCCCCCC) (des CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		Nav29/22 Mar13/23	Jun25/23			
Mar13/23	Non-ferrous Metals		Nav29/22 Mar13/23	Lun25/23			
Mar13/23	STORE	5					
Mar13/23	STORE	5					
Mær13/23	Apr28(21) 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0	S 0ct5/2/2		Jun25/23			
Mar13/23	Non-ferrous Metals	S 0ct5/2/2		Jun25/23	Base Number		
Marta223	Apr28(21) 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0	S 0ct5/2/2		Jun25/23	Base Number		
Marta223	Non-ferrous Metals	S 0ct5/2/2		10.0	Base Number		
Mar13/23	Non-ferrous Metals	S 0ct5/2/2		10.0	Base Number		
Mar13/23	Non-ferrous Metals	S 0ct5/2/2		10.0	Base Number		
Mar13/23	Non-ferrous Metals	S 0ct5/2/2		10.0	Base Number		
Mar13/23	Non-ferrous Metals	S		10.0	Base Number		
Mar13/23	Non-ferrous Metals	S		0.0 fpac pac pac pac pac pac pac pac pac pac	Base Number		
Mari 3/23	Non-ferrous Metals Viscosity @ 100°C	S		10.0 (9)Mpx (10) (10) Mpx (10) Mpx (10) (10) Mpx (10) Mpx	Base Number		
March3/223	Non-ferrous Metals	S	Nav2922 Mart 3/23	10.0 980 ymuper (uub KOH(0) 980 ymuper (uub K	Base Number	Jun 15/22	Nov29/22



Certificate 12367 Test Package : FLEET 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)

Received

Diagnosed

: 29 Jun 2023

: 03 Jul 2023

Diagnostician : Don Baldridge

: GFL0062188

: 05886463

Sample No.

Lab Number

Unique Number : 10536946