

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id **562M** Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 15W40 (5 GAL)

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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

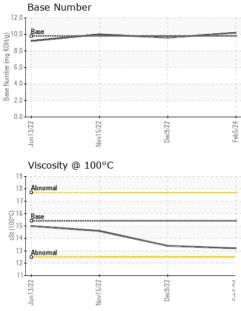
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0106666	GFL0060729	GFL0060646
Sample Date		Client Info		05 Feb 2024	09 Dec 2022	15 Nov 2022
Machine Age	hrs	Client Info		16293	16241	16091
Oil Age	hrs	Client Info		150	150	487
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	10	15	23
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	3
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
- · ·		A OTH A DEVOE				
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	<1 history2
	ppm ppm		limit/base	-	-	
ADDITIVES		method	0	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 61	history1 4	history2 4
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 61 0	history1 4 0	history2 4 2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 61 0 41	history1 4 0 58	history2 4 2 65
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	Current 61 0 41 0	history1 4 0 58 <1	history2 4 2 65 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	Current 61 0 41 0 582	history1 4 0 58 <1 852	history2 4 2 65 <1 976
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current 61 0 41 0 582 1635	history1 4 0 58 <1 852 1045	history2 4 2 65 <1 976 1157
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 61 0 41 0 582 1635 839	history1 4 0 58 <1 852 1045 946	history2 4 2 65 <1 976 1157 1073
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270	Current 61 0 41 0 582 1635 839 994	history1 4 0 58 <1 852 1045 946 1149	history2 4 2 65 <1 976 1157 1073 1302
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 0 1010 1070 1150 1270 2060	Current 61 0 41 0 582 1635 839 994 2674	history1 4 0 58 <1 852 1045 946 1149 3336	history2 4 2 65 <1 976 1157 1073 1302 3959
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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 0 60 1010 1070 1150 1270 2060	Current 61 0 41 0 582 1635 839 994 2674 Current	history1 4 0 58 <1 852 1045 946 1149 3336 history1	history2 4 2 65 <1 976 1157 1073 1302 3959 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 61 0 41 0 582 1635 839 994 2674 2674 Current 5	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base >25	Current 61 0 41 0 582 1635 839 994 2674 Current 5 3 <1	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 4	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	Current 61 0 41 0 582 1635 839 994 2674 Current 5 3 <1	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 2	4 2 65 <1 976 1157 1073 1302 3959 history2 6 2 1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	Current 61 0 41 0 582 1635 839 994 2674 Current 5 3 <1 Current	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 2 history1	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6 2 1 + 6 2 1 + + + history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 limit/base >25 >20 limit/base	current 61 0 41 0 582 1635 839 994 2674 5 3 <1 current 0 0	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 2 history1 0.4	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6 2 1 history2 6 2 1 0.4
ADDITIVES 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	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >20	current 61 0 41 0 582 1635 839 994 2674 Current 5 3 <1 Current 0.1 5.1	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 2 history1 0.4 9.4	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6 2 1 history2 6 2 1 0.4 9.8
ADDITIVES 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	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 20 20 20 20 20 20 20 20 20 20 20 20	current 61 0 41 0 582 1635 839 994 2674 current 5 3 <1 current 0.1 5.1 21.7	history1 4 0 58 <1 852 1045 946 1149 3336 history1 4 2 history1 0.4 9.4 21.7	history2 4 2 65 <1 976 1157 1073 1302 3959 history2 6 2 1 history2 0 0.4 9.8 22.7



OIL ANALYSIS REPORT

VISUAL



		, _	y : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 409 o. : GFL0106666 Received : 19 Feb 2024 74 Per : 06092627 Tested : 20 Feb 2024 NOF ber : 10885480 Diagnosed : 20 Feb 2024 - Don Baldridge ige : FLEET Contact port, contact Customer Service at 1-800-237-1369. jnaha hat are outside of the ISO 17025 scope of accreditation.					
		Jun 13/22		Dec9/22	Feb5/24	Jun13/22	Nov15/22 Dec9/22	
		13 Abnormal				.0		
		C 16 Base 15 3 14			qui	.0-		
		17- ♀ ¹⁶ Base			01 B KOH/d)	.0 - Base		
		19 18 - Abnormal			12	.0 T		
		Viscosity @ 100	°C			Base Numbe	er	
		Jun13/22		Dec9/22 -	Feb5/24			
		2		Announcement				
		4						
		6 - W.						
		8 - tin						
		Non-ferrous Met	als	Dec	Feb			
		Jun 13/22 0 Vov 15/22	H	Dec9/22	Feb5/24			
		5-						
		튭 15 - 10 -			_			
Q	L	20 -						
Dec9/22 -	L DA	25 - iron iron chromium						
		Ferrous Alloys						
		Visc @ 100°C GRAPHS	cSt	ASTM D445	15.4	13.2	13.4	14.6
		FLUID PROP		method	limit/base		history1	history2
		Free Water	scalar	*Visual		NEG	NEG	NEG
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Dec9/22	Feb 5/24	Appearance Odor	scalar scalar	*Visual *Visual	NORML NORML	NORML NORML	NORML NORML	NORML NORML
5		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
		Debris	scalar	*Visual	NONE	NONE	NONE	NONE
		Precipitate Silt	scalar scalar	*Visual *Visual	NONE	NONE NONE	NONE	NONE
			scalar					
		White Metal Yellow Metal	scalar scalar	*Visual *Visual	NONE NONE	NONE NONE	NONE	NONE NONE
		White Metal	scalar	*Visual	NONE	NONE		

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