

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id 420094 - SW4022 Component

Diesel Engine Fluid

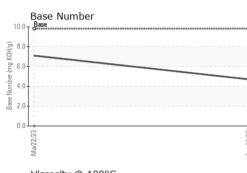
PETRO CANADA DURON SHP 15W40 (--- GAL)

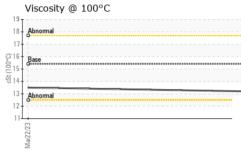
DIAGNOSIS	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		GFL0089450	GFL0075314	
Resample at the next service interval to monitor.	Sample Date		Client Info		15 Aug 2023	22 Mar 2023	
Wear	Machine Age	mls	Client Info		109690	91505	
All component wear rates are normal.	Oil Age	mls	Client Info		109690	0	
Contamination	Oil Changed		Client Info		Changed	N/A	
There is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	
oil.	CONTAMINA		method	limit/base	current	history1	history2
Fluid Condition The BN result indicates that there is suitable	Fuel		WC Method	>3.0	<1.0	<1.0	
	Glycol		WC Method	20.0	NEG	NEG	
alkalinity remaining in the oil. The condition of the oil is suitable for further service.	-				NEG	NEG	
on is suitable for further service.	WEAR METAL	_S	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>120	11	4	
	Chromium	ppm	ASTM D5185m	>20	<1	<1	
	Nickel	ppm	ASTM D5185m	>5	0	0	
	Titanium	ppm	ASTM D5185m	>2	<1	0	
	Silver	ppm	ASTM D5185m	>2	<1	0	
	Aluminum	ppm	ASTM D5185m	>20	2	<1	
	Lead	ppm	ASTM D5185m	>40	2	<1	
	Copper	ppm	ASTM D5185m	>330	2	2	
	Tin	ppm	ASTM D5185m	>15	<1	<1	
	Vanadium	ppm	ASTM D5185m		<1	0	
	Cadmium	ppm	ASTM D5185m		<1	0	
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	0	0	0	
	Barium	ppm	ASTM D5185m	0	0	0	
	Molybdenum	ppm	ASTM D5185m	60	45	41	
	Manganese	ppm	ASTM D5185m	0	<1	<1	
	Magnesium	ppm	ASTM D5185m	1010	13	90	
	Calcium	ppm	ASTM D5185m	1070	2719	2733	
	D						
	Phosphorus	ppm	ASTM D5185m	1150	1096	1044	
	Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m				
				1270	1096	1044	
	Zinc	ppm ppm	ASTM D5185m	1270	1096 1318 3656	1044 1423	
	Zinc Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1270 2060 limit/base	1096 1318 3656	1044 1423 3331	
	Zinc Sulfur CONTAMINAN	ppm ppm NTS	ASTM D5185m ASTM D5185m method	1270 2060 limit/base	1096 1318 3656 current	1044 1423 3331 history1	
	Zinc Sulfur CONTAMINAN Silicon	ppm ppm NTS ppm	ASTM D5185m ASTM D5185m method ASTM D5185m	1270 2060 limit/base >25	1096 1318 3656 current 7	1044 1423 3331 history1 7	 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm NTS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1270 2060 limit/base >25	1096 1318 3656 current 7 6 5	1044 1423 3331 history1 7 5	 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm NTS ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1270 2060 limit/base >25 >20 limit/base	1096 1318 3656 current 7 6 5	1044 1423 3331 history1 7 5 6	 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm NTS ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m Method	1270 2060 limit/base >25 >20 limit/base >4	1096 1318 3656 current 7 6 5 5 current	1044 1423 3331 history1 7 5 6 history1	 history2 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm VTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	1270 2060 imit/base >25 >20 imit/base >4 >20	1096 1318 3656 current 7 6 5 5 current 0.3	1044 1423 3331 history1 7 5 6 history1 0.2	 history2 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm VTS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1270 2060 imit/base >25 >20 imit/base >4 >20	1096 1318 3656 current 7 6 5 5 current 0.3 10.2 25.5	1044 1423 3331 history1 7 5 6 history1 0.2 8.5	 history2 history2 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm VTS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624	1270 2060 imit/base >25 >20 imit/base >4 >20 >30 imit/base	1096 1318 3656 current 7 6 5 current 0.3 10.2 25.5 current	1044 1423 3331 7 5 6 history1 0.2 8.5 20.5 history1	 history2 history2 history2 history2
	Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm VTS ppm ppm ppm ppm % Abs/cm Abs/.1mm DATION Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	1270 2060 limit/base >25 >20 limit/base >20 >30 limit/base >25	1096 1318 3656 current 7 6 5 5 current 0.3 10.2 25.5	1044 1423 3331 history1 7 5 6 history1 0.2 8.5 20.5	 history2 history2



OIL ANALYSIS REPORT

VISUAL





			TIGONE						
		V	Vhite Metal	scalar	*Visual	NONE	NONE	NONE	
		Y	ellow Metal	scalar	*Visual	NONE	NONE	NONE	
			recipitate	scalar	*Visual	NONE	NONE	NONE	
			ilt	scalar	*Visual	NONE	NONE	NONE	
			ebris	scalar	*Visual	NONE	NONE	NONE	
			and/Dirt	scalar	*Visual	NONE	NONE	NONE	
	/23		ppearance	scalar	*Visual	NORML	NORML	NORML	
	ug 15,)dor	scalar	*Visual	NORML	NORML	NORML	
	4		mulsified Water		*Visual		NEG	NEG	
°C				scalar		>0.2			
			ree Water	scalar	*Visual		NEG	NEG	
			FLUID PROPE	ERTIES	method				history2
		V	′isc @ 100°C	cSt	ASTM D445	15.4	13.2	13.5	
			GRAPHS						
			Ferrous Alloys						
		12							
		10	iron chromium						
		8	nickel						
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		udd 6-							
		4 -							
		2							
		2							
		01	23	****************		33			
			Mar22/23			Aug15/23			
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		10 .	Non-ferrous Meta	als					
		10	copper						
		8	sessesses lead						
		udd							
		1 4	1						
		2			destautes testes in the	and the second			
		0							
		0	2/23 -			5/23 .			
			Mar22/22			Aug15/23			
			Viscosity @ 100°	С			Dear Nearly and		
		¹⁹ T				10	Base Number		
		18	Abnormal						
		17				(B) 8	.0-		
		ن 16	Base			Base Number (mg KOH/g)	.0-		
		() 001) 15-	Base			er (m			
		रु 14				4 mp 4	.0-		
		13-	Abnormal			ase			
		12				¹¹ 2	.0-		
		11							
			Mar2 2/23			Aug15/23	Mar22/23		Aug15/23
			Mar			Aug	Mari		Augi
Certificate L2367	Laboratory Sample No. Lab Number Unique Number Test Package sample report	: 0 : 0 : 1 : F	VearCheck USA - GFL0089450 15927997 0607944 FLEET fact Customer Serv	Received Diagnos Diagnosi	d : 187 ed : 217 tician : Dor	Aug 2023 Aug 2023 n Baldridge	3 GFL Enviro	16011 We Cont	Sugar Land Hauling est Belfort Street Sugar Land, TX US 77498 act: Gino Griego ego@gflenv.com
* - Denotes test	t methods that a	are o	re outside of the ISO 17025 scope of accreditation. ifications are based on the simple acceptance decision rule (JCGM 106:2012)						T: F:

Submitted By: TECHNICIAN ACCOUNT