

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

#### **190811** Component **Diesel Engine** Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

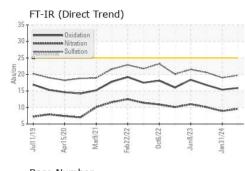
#### Fluid Condition

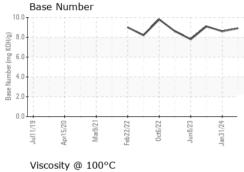
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

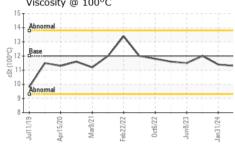
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info	PCA0128924		PCA0117067	PCA0106290	
Sample Date		Client Info	19 Jun 2024		31 Jan 2024	27 Sep 2023	
Machine Age	mls	Client Info		0	0	12548	
Oil Age	mls	Client Info		0	0	0	
Oil Changed		Client Info	N/A		N/A	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<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	>100	17	12	19	
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	<1	
Titanium	ppm	ASTM D5185m		۰ <1	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	<1	
Aluminum	ppm	ASTM D5185m	>20	4	2	3	
Lead	ppm	ASTM D5185m	>40	1	2	2	
Copper	ppm	ASTM D5185m		4	- 1	3	
Tin	ppm	ASTM D5185m	>15	<1	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	2	3	2	1	
Barium	ppm	ASTM D5185m	0	0	0	0	
Molybdenum	ppm	ASTM D5185m	50	71	62	63	
Manganese	ppm	ASTM D5185m	0	0	0	<1	
Magnesium	ppm	ASTM D5185m	950	1068	980	1040	
Calcium	ppm	ASTM D5185m	1050	1228	1176	1254	
Phosphorus	ppm	ASTM D5185m	995	1398	1130	1187	
Zinc	ppm	ASTM D5185m	1180	1486	1275	1464	
Sulfur	ppm	ASTM D5185m	2600	3711	3235	3525	
CONTAMINAN	TS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	5	3	5	
Sodium	ppm	ASTM D5185m		2	1	<1	
Potassium	ppm	ASTM D5185m	>20	2	0	<1	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.8	0.6	1.1	
Nitration	Abs/cm	*ASTM D7624	>20	9.6	8.9	10.1	
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	19.0	20.6	
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	15.4	16.8	
Base Number (BN)	mg KOH/g	ASTM D2896		8.9	8.6	9.1	
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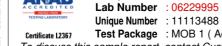






	VISUAL		method	limit/base	current	i	histor	y1	his	story2
	White Metal	scalar	*Visual	NONE	NONE		NONE		NOI	ΝE
-	Yellow Metal	scalar	*Visual	NONE	NONE		NONE		NOI	ΝE
	Precipitate	scalar	*Visual	NONE	NONE		NONE		NOI	ΝE
	Silt		*Visual	NONE NONE			NONE		NONE	
and all a	Debris	scalar	*Visual	NONE	NONE		NONE		NONE	
	Sand/Dirt	scalar	*Visual	NONE NONE			NONE NO		NO	NE
14/1 2185	Appearance	scalar	*Visual	NORML	RML NORML		NORML		NORML	
5	Odor	scalar	*Visual	NORML	NORML		NORM	L	NO	RML
	Emulsified Water	scalar	*Visual	>0.2	NEG		NEG		NEC	G
	Free Water	scalar	*Visual		NEG		NEG		NEC	G
	FLUID PROPE	RTIES	method	limit/base	current	t	histor	y1	his	story2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.3		11.4		12.0	)
	GRAPHS									
	Iron (ppm)				Lead (ppn	n)				
	200 - Severe			80	Severe					
	e <sup>150</sup>			е <sup>60</sup>						
				E 40	Abnormal					
	50			20						
		2		- O			2	2		4
	Jul11/19 Apr15/20 Mar9/21	-eb 22/22	Jun8/23	Jan 31/24	Jul11/19 Apr15/20	Mar9/21	Feb22/22	0ct6/22	Jun8/23	Jan31/24
		Fe	,	La.				0	7	Ja
	Aluminum (ppm)			50	Chromium	n (ppm	)	,		
	40 - Severe			40	Severe					
_	= 30-			_ 30						
	20 - Abnormal			<sup>30</sup> 20	Abnormal					
	10-			10						
						-		2	~	
	Jul11/19 Apr15/20 Mar9/21	Feb 22/22	Jun8/23	Jan31/24	Jul11/19 Apr15/20	Mar9/21	Feb22/22	0ct6/22	Jun8/23	Jan31/24
	් දී ් Copper (ppm)	E C		Jai			Fer	0	٦ ۲	Jai
	<sup>600</sup>	Silicon (ppm)								
	500			60	T L L					
	400 Severe			툴.40						
	₽300	5			Abnormal					
	100			20						
				6		21	2-1	2-1		4
	Jul11/19 Apr15/20 Mar9/21	Feb22/22 0~46/22	Jun8/23	Jan 31/24	Juli 1/19 - Apr15/20 -	Mar9/21	Feb 22/22	0ct6/22	Jun8/23	Jan31/24
		LE.	7	ř			£	_	~	Ъ
	Viscosity @ 100°C			10.0	Base Num	ber		~		
	14 Abnormal			(b), HO, 8, 0 (b), HO, 8, 0 (b), HO, 8, 0 (b), HO, 8, 0 (c), 10 (c), 1			$\sim$		$\checkmark$	-
	(0-001) 12- Base	$\wedge$		Ĕ 6.0						
	10 - Abnormal			N as 2.0						
	8	5		0.0			2	2	~	4
	Jul11/19 Apr15/20 Mar9/21	Feb22/22	Jun8/23	Jan 31/24	Jul11/19 Apr15/20	Mar9/21	Feb22/22	0ct6/22	Jun8/23	Jan31/24
	_ <u></u> _ ≥		, – –	a	JL Ap	2	0	0	-	ai

: 09 Jul 2024 - Wes Davis



Test Package : MOB 1 (Additional Tests: TBN) 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)

Diagnosed

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Contact: MIKE LONGETTE

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Contact/Location: MIKE LONGETTE - MILRUT

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