

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 06D0308342

Component Diesel Engine Fluid TOTAL FINA RUBIA TIR 7900 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. High concentration of dirt present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

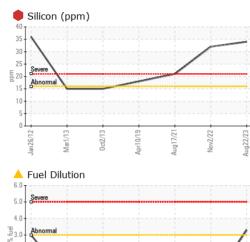
,		Jan2012	Mar2013 Oct2013	Apr2019 Aug2021 Nov2022	Aug2023	
SAMPLE INFORM	MATION	method	limit/base	e current	history1	history2
Sample Number		Client Info		WC877360	WC877095	WC
Sample Date		Client Info		22 Aug 2023	02 Nov 2022	17 Aug 2021
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	e current	history1	history2
Glycol		WC Method		NEG	NEG	0.0
WEAR METALS		method	limit/base	e current	history1	history2
Iron	ppm	ASTM D5185(m)	>101	43	27	18
Chromium	ppm	ASTM D5185(m)	>16	2	2	1
Nickel	ppm	ASTM D5185(m)	>6	0	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>21	2	2	2
Lead	ppm	ASTM D5185(m)	>41	4	4	2
Copper	ppm	ASTM D5185(m)	>21	17	22	26
Tin	ppm	ASTM D5185(m)	>13	6	4	3
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		1	<1	0
ADDITIVES		method	limit/base	e current	history1	history2
Boron	ppm	ASTM D5185(m)		11	1	2
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		12	7	8
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		180	126	135
Calcium	ppm	ASTM D5185(m)	3290	1848	1902	1876
Phosphorus	ppm	ASTM D5185(m)	1200	775	787	744
Zinc	ppm	ASTM D5185(m)	1400	856	857	882
Sulfur	ppm	ASTM D5185(m)	4000	2488	2738	2738
Lithium				2400	2100	
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS			limit/base	<1		<1 history2
		ASTM D5185(m)	limit/base	<1	<1	
CONTAMINANTS		ASTM D5185(m) method		<1 current	<1 history1	history2
CONTAMINANTS Silicon	ppm	ASTM D5185(m) method ASTM D5185(m)		<1 current 34	<1 history1 32	history2 21
CONTAMINANTS Silicon Sodium Potassium	ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>16	<1 current 34 9	<1 history1 32 10	history2 21 9
CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>16 >20	<1 • current • 34 9 1 • 3.3	<1 history1 32 10 1	history2 21 9 1
CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7593*	>16 >20 >3.0	<1 • current • 34 9 1 • 3.3	<1 history1 32 10 1 <1.0	history2 21 9 1 <1.0
CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm %	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7593* method	>16 >20 >3.0 limit/base	<1 • Current • 34 9 1 • 3.3 • Current	<1 history1 32 10 1 <1.0 history1	history2 21 9 1 <1.0 history2
CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm %	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D7593* method ASTM D7844*	>16 >20 >3.0 limit/base >0.8	<1 • Current • 34 9 1 • 3.3 • Current 0.3	<1 history1 32 10 1 <1.0 history1 0.1	history2 21 9 1 <1.0 history2 0
CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D7593* method ASTM D7844* ASTM D7824*	>16 >20 >3.0 limit/base >0.8 >20	<1 • 34 9 1 • 3.3 • current 0.3 4.7 17.4	<1 history1 32 10 1 <1.0 +istory1 0.1 4.4	history2 21 9 1 <1.0 history2 0 4.4
CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm % % Abs/cm Abs/cm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7593* method ASTM D7624* ASTM D7624* ASTM D7615*	>16 >20 >3.0 limit/base >0.8 >20 >30 limit/base	<1 • 34 9 1 • 3.3 • current 0.3 4.7 17.4 • current	<1 history1 32 10 1 <1.0 history1 0.1 4.4 16.8 history1	history2 21 9 1 <1.0
CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D7593* method ASTM D7844* ASTM D7824* ASTM D7415*	>16 >20 >3.0 limit/base >0.8 >20 >30 limit/base >25	<1	<1 history1 32 10 1 <1.0 history1 0.1 4.4 16.8 history1 10.5	history2 21 9 1 <1.0

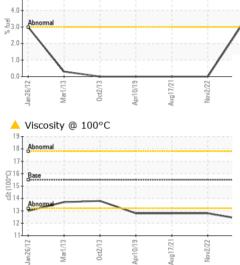
Report Id: DEPOTT [WCAMIS] 02578058 (Generated: 09/06/2023 15:00:38) Rev: 1



OIL ANALYSIS REPORT

VISUAI





VISUAL		meth	iod	limit/base	е (current		history	/1	histo	ry2	
White Metal	scalar	Visual	*	NONE	٧L	ITE		-		VLITE		
Yellow Metal	scalar	Visual* Visual* Visual* Visual* Visual* Visual*		NONE	NONE NONE NONE NONE NONE NORML			 		NONE NONE NONE VLITE NONE NORML		
Precipitate	scalar			NONE								
Silt	scalar			NONE								
Debris	scalar			NONE								
Sand/Dirt	scalar			NONE								
Appearance	scalar			NORML								
Odor	scalar	Visual*		NORML	NC	NORML		NORML		NORML		
Emulsified Water	scalar Visual*		>0.2	NE	NEG		NEG		NEG			
Free Water	scalar	Visual	*		NE	G	Ν	IEG		NEG		
FLUID PROPERT	IES	meth	od	limit/base	e (current		history	/1	histo	ry2	
/isc @ 100°C	cSt	ASTM D72	279(m)	15.5	<u> </u>	.3	1	2.8		12.8		
GRAPHS												
Iron (ppm)						d (ppm)					
Abnormal					50 Severe	mal						
								1	1			
×					30							
\mathbf{i}			-									
					10	-						
1/12 1/13 1/13	- 61/(1/21	2/22 -	2/23	3/12	/13+	0ct2/13 -	- 61/0	7/21-	/22		
Jan 26/12 Mar 1/13 0ct 2/13	Apr10/19	Aug17/21-	Nov2/22	Aug22/23	Jan 26/12	Mar1/13	0ct2	Apr10/19	Aug17/21	Nov2/22		
Aluminum (ppm)		-		-	Chro	omium	(ppm)	-	-			
Severe					25 Severe							
Abnormal					20 - Abnor							
					15							
·					15							
					5-							
13	61	21-	22	23	12	13	13	19	21-	22-		
Jan 26/12 Mar 1/13 0ct 2/13	Apr10/19	Aug17/21	Nov2/22	Aug22/23	Jan 26/12	Mar1/13	0ct2/13	Apr10/19	Aug17/21.	Nov2/22		
Copper (ppm)		-		4	-	on (ppi	m)		-			
Severe			1		40							
Aboormal		\sim	-		30					-		
	/				20 - Severa							
	1				10-							
2/13 +	- 61/0	1/21	122+	2/23	3/12	/13	0ct2/13 -	- 61/1	7/21-	/22		
Jan 26/12 - Mar1/13 - Oct2/13 -	Apr10/19	Aug17/21.	Nov2/22	Aug22/23 -	Jan 26/12	Mar1/13	0ct2	Apr10/19	Aug17/21-	Nov2/22		
Viscosity @ 100°C				-	A Fuel	Dilutio	n		-			
Ι					6.0 Sever							
Abnormal	nadaaaa				5.0 - Geven							
Base				fue	3.0 Abno	rmal	1	1	1			
Abnormal-					2.0						/	
•					1.0					/		
		21-	22+			13	13	61/	/21	22		
/12 /13	5				6		-			01		
Jan 26/12	Apr10/19	Aug17/21.	Nov2/22	Aug22/23	Jan 26/12	Mar1/13	0ct2/13	Apr10/19	Aug17/21	Nov2/22		

Accredited Laboratory Unique Number : 5631118 Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, Visual) Contact: Jean-Marc Beaudoin JEAN-MARC.BEAUDOIN@Forces.gc.ca To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CALA

ISO 17025:2017

Laboratory

Sample No. Lab Number

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