

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id . ٢

MACK 420075 Component Diesel Engine

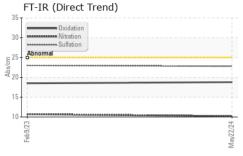
PETRO CANADA DURON HP 15W40 (--- GAL)

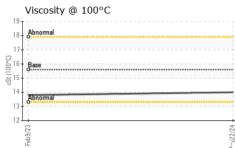
	SAMPLE INFORMAT	ON mothod				
Resample at the next service interval to monitor. Sample Date Client Info 22 May 2024 09 Feb 2023 All component wear rates are normal. Contamination Tit252 8553 Contamination Client Info 11252 8553 Fue is no indication of any contamination in the oil. Client Info Changed Client Info Changed N/A Sample Status Client Info Changed NORMAL NORMAL NORMAL Fuel WC Method >3.0 <1.0 <1.0 NEG Fuel WC Method >3.0 <1.0 <1.0 NEG Water WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Water WO Method >0.2 NEG NEG Othornium ppm ASTM05156m >10 <1.0 Nickel ppm ASTM05156m >2.0 <1 <1 Nickel ppm ASTM05156m >2.0 <1 <1 Nickel ppm ASTM05156m >0 <1 <1		ON memor		current	history1	history2
Wear Machine Age hrs Client Info 11252 8553 All component wear rates are normal. Oil Age hrs Client Info 796 0 Contamination There is no indication of any contamination in the oil. Sample Status Imit/base NORMAL NORMAL Fluid Condition The condition of the oil is acceptable for the time in service. WC Method >3.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 1.0 <1.0 <1.0	n Sample Number	Client Info	G	GFL0122257	GFL0071119	
All component wear rates are normal. Oil Age hrs Client Info 796 0 Contamination There is no indication of any contamination in the oil. Oil Age Client Info Changed N/A Fluid Condition The condition of the oil is acceptable for the time in service. Welchadd Sample Status NORMAL NORMAL NORMAL Fuel WC Method 3.0 <1.0	next service interval to monitor. Sample Date	Client Info	2	22 May 2024	09 Feb 2023	
Oil Changed Client Info Changed N/A Sample Status Imit/base NORMAL NORMAL Normalition The condition of the oil is acceptable for the time in ervice. Fuel WC Method >3.0 <1.0	Machine Age hrs	Client Info	1	1252	8553	
Contamination Oil Changed Client Info Changed N/A Sample Status Imaged NORMAL	ear rates are normal. Oil Age hrs	Client Info	7	/96	0	
There is no indication of any contamination in the il. Fuel CONTAMINATION method imit/base current history1 Fuel WC Method >3.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG WEAR METALS method imit/base current history1 Iron ppm ASTM DS185(m) >120 15 11 Chromium ppm ASTM DS185(m) >20 <1 <1 Nickel ppm ASTM DS185(m) >20 <1 <1 Silver ppm ASTM DS185(m) >20 <1 Silver ppm ASTM DS185(m) >20 <2 Lead ppm ASTM DS185(m) >30 10 <1 Tinn ppm ASTM DS185(m) >30 10 <1 Chromium ppm ASTM DS185(m) >15 0 <1 Chromium ppm ASTM DS185(m) >30 10 <1 Chromium ppm ASTM DS185(m) >15 0 <1 Chromium ppm ASTM DS185(m) >15 0 <1 Chromium ppm ASTM DS185(m) >15 0 <1 Chromium ppm ASTM DS185(m) >10 0 Cadmium ppm ASTM DS185(m) >0 0 Cadmium ppm ASTM DS185(m) =0 0 Cadmium ppm ASTM DS185(m) 0 33 9 Barium ppm ASTM DS185(m) 0 33 9 Barium ppm ASTM DS185(m) 0 0 0 Chromium ppm ASTM DS185(m) 0 0 0 Chromium ppm ASTM DS185(m) 0 0 0 Chromium ppm ASTM DS185(m) 0 0 0 Cadmium ppm ASTM DS185(m) 0 0 0 Cadmium ppm ASTM DS185(m) 0 0 0 Cadmium ppm ASTM DS185(m) 0 0 0 Chromium ppm ASTM DS185(Client Info	С	Changed	N/A	
III. CONTAMINATION method limit/base current history1 Fuel WC Method >3.0 <1.0	ation of any contamination in the Sample Status		N	ORMAL	NORMAL	
The condition of the oil is acceptable for the time in intervice. Fuel WC Method >3.0 <1.0		method	limit/base	current	history1	history2
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Chromium ppm ASTM D5185(m) >20 <1 <1 Nickel ppm ASTM D5185(m) >5 <1	WEAR METALS	method	limit/base	current	history1	history2
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Nickel ppm ASTM D5185(m) >5 <1 5 Titanium ppm ASTM D5185(m) >2 0 <1					<1	
Titanium ppm ASTM D5185(m) >2 0 <1 Silver ppm ASTM D5185(m) >2 0 0 Aluminum ppm ASTM D5185(m) >20 2 2 Lead ppm ASTM D5185(m) >40 <1						
Silver ppm ASTM D5185(m) >2 0 0 Aluminum ppm ASTM D5185(m) >20 2 2 Lead ppm ASTM D5185(m) >40 <1 <1 Copper ppm ASTM D5185(m) >330 1 <1 Tin ppm ASTM D5185(m) >330 1 <1 Antimony ppm ASTM D5185(m) >15 0 <1 Vanadium ppm ASTM D5185(m) >15 0 <1 O 0 0 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185(m) 0 3 9 Barium ppm ASTM D5185(m) 0 3 9 Barium ppm ASTM D5185(m) 0 60 63 56 <td>tels.</td> <td></td> <td></td> <td></td> <td></td> <td></td>	tels.					
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Lead ppm ASTM D5185(m) >40 <1						
CopperppmASTM D5185(m)>3301<1TinppmASTM D5185(m)>150<1						
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Manganese ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 1010 1004 892				-		
Magnesium ppm ASTM D5185(m) 1010 1004 892						
		()				
Phosphorus ppm ASTM D5185(m) 1150 1039 1150						
Zinc ppm ASTM Dotion(m) 1130 1234 1262		()				
Sulfur ppm ASTM D5185(m) 2060 2474 2725 Lithium ppm ASTM D5185(m) Cold click click <thclick< th=""> click click</thclick<>						
CONTAMINANTS method limit/base current history1						history2
		()				
	Potassium ppn					
		method	iimii/base	current	nistory i	history2
	INFRA-RED	AOTHERS	4	~ ~	0 1	
	Soot % %	ASTM D7844*		0.4	0.1	
Sulfation Abs/.1mm ASTM D7415* >30 22.8 23.0	Soot % % Nitration Abs/	/cm ASTM D7624*	>20	10.2	10.7	

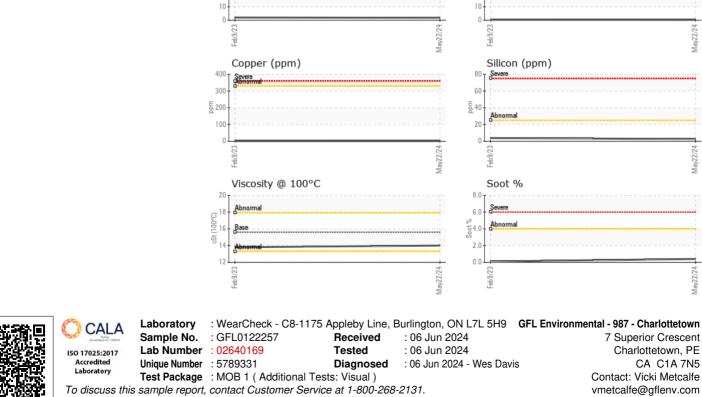


OIL ANALYSIS REPORT

FLUID DEGRA	DATION	method	limit/base	current	history1	histo
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.8	18.5	
VISUAL		method	limit/base	current	history1	histo
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	VLITE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPE	ERTIES	method	limit/base	current	history1	histo
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	14.0	13.8	
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Severe			80	Severe		
00			든 ⁶⁰	Abaranal		
00 - Abnormal						
0			20	1		
Feb 9/23			May22/24	Feb9/23		
			May			
Aluminum (ppm)			50	Chromium (p	opm)	
40			40	Severe		
30 - Abnormal						
				- Abnormal		
10			10			
Feb 9/23				Feb 9/23 -		
음			May22/24	Feb		
Copper (ppm)			80	Silicon (ppm))	
00 Severe			60	1		
.00			톱 40			
00 -			20	Abnorma		
0			0			
Feb 9/23			May22/24	Feb 9/23		
			May	Ter-		
Viscosity @ 100°	C		8.0	Soot %		
Abnormal				Severe		
16 Base			6.0 2 ⁹	Abnormal		
			54.0			
			2.0			
12 Feb9/23			0.0	Feb9/23		







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.

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