

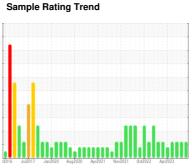
OIL ANALYSIS REPORT



NEW FLYER 0805

Component **Diesel Engine**

SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- GAL)





DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. 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. Tests confirm the presence of fuel in the oil.

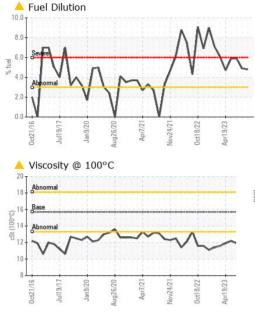
Fluid Condition

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

E PLUS XHD-7 15W40	(GAL)	t2016 Jul20	17 Jan2020 Aug2020	Apr2021 Nov2021 Oct2022	Apr2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0830293	WC0830257	WC0791463
Sample Date		Client Info		13 Oct 2023	27 Aug 2023	15 Jul 2023
Machine Age	kms	Client Info		123364	0	0
Oil Age	kms	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	27	29	27
Chromium	ppm	ASTM D5185(m)	>5	<1	1	1
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	2	3	2
Lead	ppm	ASTM D5185(m)	>25	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>100	2	7	2
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1	1	<1
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		56	57	54
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		892	936	914
Calcium	ppm	ASTM D5185(m)		981	999	981
Phosphorus	ppm	ASTM D5185(m)		911	1002	997
Zinc	ppm	ASTM D5185(m)		1115	1137	1116
Sulfur	ppm	ASTM D5185(m)		2273	2388	2369
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	3	3
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Fuel	%	ASTM D7593*	>3.0	4.8	▲ 4.9	▲ 5.9
INFRA-RED		method	limit/base	current	history1	history2
	0/	ASTM D7844*	>6	0.5	0.6	0.6
Soot %	%					
	% Abs/cm	ASTM D7624*	>20	9.8	9.9	10.7
Nitration			>20 >30	9.8 22.9	9.9 24.8	10.7 25.3
Soot % Nitration Sulfation FLUID DEGRADA	Abs/cm Abs/.1mm	ASTM D7624*				



OIL ANALYSIS REPORT



VISUAL		m	ethod	limit	base	current		history1			history	
		calar Visual*				NEG NEG		NEG NEG			NEG NEG	
FLUID PROPER	TIES method		limit/	limit/base curre			I	nistory	/1	history		
Visc @ 100°C	cSt ASTM D7279(m)		15.7	<u> </u>			▲ 12.3			▲ 11.9		
GRAPHS												
Iron (ppm)					60	Lead (p	pm)					
Severe					50	Severe						
					40							
Abnormal				-	ᇤ30	Abnormal	ЩН.					
Λ			Λ		20	- 1 - 1 - 1 - 1 - 1						
Www.	~~	<u>~</u>	/ \	~	10						Λ	
718 718 718 718 718 718 718 718 718 718	1/2/1	1/21	1/22	1/23	0	716	1/20	./20	12/2	17/1	122/	.73
Oct21/16 Jull 9/17	Apr7/21	Nov24/21	Oct18/22	Apr19/23		Oct21/16 Jul19/17	Jan9/20	Aug26/20	Apr7/21	Nov24/21	Oct18/22	Apr19/23
Aluminum (ppm)					12	Chromi	um (p	pm)				
Severe					10	Severe						
					8							
Abnormal					mdd 6	Abnormal						
					4							
			^		2	^					\wedge	
Jul19/17 - Jun9/20	Apr7/21	4/21	3/22	1/23	0	Oct21/16	Jan9/20	9/20	Apr7/21	4/21	3/22	1/23
Oct21/16 Jul19/17 Jan9/20 Aua26/20	Apr	Nov24/21	Oct18/22	Apr19/23		Oct21/16 Jul19/17	Jan	Aug26/20	Apr	Nov24/21	Oct18/22	Apr19/23
Copper (ppm)					60	Silicon (ppm)					
Severe					50	Severe						
					40							
Ahnormal			٨		EL 30	Abnormal						
			1		20						٨	
)			1		10	2		<u>~</u>		~~	IL	
Jul19/17 Jan9/20 Jan9/20	Apr7/21	Nov24/21	Oct18/22	Apr19/23	0	Oct21/16	9/20	6/20	7/21	4/21	8/22	Apr19/23
4		Nov	0ct1	Apri			Jan9/	Aug26/	Apr7,	Nov24	0ct18/	Aprl
Viscosity @ 100°				1711111	10.0	Fuel Dil	ution					
Abnormal					8.0					1	1/	
Base					6.0	Severe 1					MA	1
Abnormal			Δ.		% fue	IV	r	١.		1	V	V
w		7	1	^	4.0	Abnormal	W	1	7	1		
1-1-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2					2.0	V		V		V		
Jull 9/17— Jan 9/20— Jan 9/20—	Apr7/21-	14/21	8/22 -	9/23	0.0	Oct21/16	Jan9/20 -	6/20	Apr7/21-	4/21	8/22 -	9/23
Oct21/76 Jul19/17 Jan9/20	Apr	Nov24/21	Oct18/22	Apr19/23		Oct2 Jull	Jan	Aug26/20	Apr	Nov24/21	Oct18/22	Apr19/23



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5658972

: WC0830293

: 02589906

Validity of results and interpretation are based on the sample and information as supplied.

To discuss this sample report, contact Customer Service at 1-800-268-2131.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 18 Oct 2023 Diagnosed : 19 Oct 2023

Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: PercentFuel)

2200 UPPER JAMES,, MOUNTAIN TRANSIT STOREROOM MOUNT HOPE, ON CA LOR 1W0

Contact: Jeff Parr jeff.parr@hamilton.ca Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (905)546-2424

F: (905)679-4502

CITY OF HAMILTON