

No relevant graphs to display

monitor.

RECOMMENDATION	PROBLEMATIC T	EST RE	SULTS				
Oil and filter change at the time of sampling has	Sample Status				ABNORMAL	NORMAL	NORMAL
been noted. Resample at the next service interval to	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<u> </u>	5.8	5.6

Customer Id: IDECLE Sample No.: IL0031160 Lab Number: 05900573 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 <u>don.b505@comcast.net</u>

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	Oil and filter change at the time of sampling has been noted.			
Change Filter			?	Oil and filter change at the time of sampling has been noted.			

HISTORICAL DIAGNOSIS



04 Oct 2022 Diag: Don Baldridge

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

17 Dec 2021 Diag: Jonathan Hester



Resample at the next service interval to monitor.All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

15 Jun 2021 Diag: Jonathan Hester





Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.Metal levels are typical for a new component breaking in. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



view report







OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 472203

Component

Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- QTS)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN level is low.

		Jun202	1 Dec2021	0ct2022 J	un2023	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0031160	IL0026955	IL0021333
Sample Date		Client Info		15 Jun 2023	04 Oct 2022	17 Dec 2021
Machine Age	mls	Client Info		236335	172100	87109
Oil Age	mls	Client Info		64235	42995	53400
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	83	31	39
Chromium	ppm	ASTM D5185m	>20	4	2	3
Nickel	ppm	ASTM D5185m	>4	2	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	6	11	27
Lead	ppm	ASTM D5185m	>40	7	5	6
Copper	ppm	ASTM D5185m	>330	2	3	11
Tin	ppm	ASTM D5185m	>15	2	1	2
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250	current 4	history1 9	history2 20
	ppm ppm					
Boron		ASTM D5185m	250	4	9	20
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	4 0	9	20 2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	4 0 68	9 0 56	20 2 45
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	4 0 68 2	9 0 56 <1	20 2 45 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	4 0 68 2 1024	9 0 56 <1 638	20 2 45 2 481
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	4 0 68 2 1024 1233	9 0 56 <1 638 1360	20 2 45 2 481 1583
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	4 0 68 2 1024 1233 1106	9 0 56 <1 638 1360 823	20 2 45 2 481 1583 702
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	4 0 68 2 1024 1233 1106 1364	9 0 56 <1 638 1360 823 1015	20 2 45 2 481 1583 702 892
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	4 0 68 2 1024 1233 1106 1364 3262	9 0 56 <1 638 1360 823 1015 2700	20 2 45 2 481 1583 702 892 1985
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	4 0 68 2 1024 1233 1106 1364 3262 current	9 0 56 <1 638 1360 823 1015 2700 history1	20 2 45 2 481 1583 702 892 1985 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	4 0 68 2 1024 1233 1106 1364 3262 current 7	9 0 56 <1 638 1360 823 1015 2700 history1 7	20 2 45 2 481 1583 702 892 1985 history2 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	4 0 68 2 1024 1233 1106 1364 3262 current 7 3	9 0 56 <1 638 1360 823 1015 2700 history1 7 0	20 2 45 2 481 1583 702 892 1985 history2 15 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12	9 0 56 <1 638 1360 823 1015 2700 history1 7 0 21	20 2 45 2 481 1583 702 892 1985 history2 15 2 2 75
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12 current	9 0 56 <1 638 1360 823 1015 2700 history1 7 0 21 history1	20 2 45 2 481 1583 702 892 1985 history2 15 2 75 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12 current 0.8	9 0 56 <1 638 1360 823 1015 2700 history1 7 0 21 history1 0.7	20 2 45 2 481 1583 702 892 1985 history2 15 2 75 history2 0.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12 7 3 12 current 0.8 21.8	9 0 56 <1 638 1360 823 1015 2700 history1 7 0 210 21 history1 0.7 14.1	20 2 45 2 481 1583 702 892 1985 history2 15 2 75 history2 0.6 12.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >3 >20	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12 current 0.8 21.8 37.9	9 0 56 <1 638 1360 823 1015 2700 history1 7 0 21 history1 0.7 14.1 27.3	20 2 45 2 481 1583 702 892 1985 history2 15 2 75 history2 0.6 12.5 25.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >30	4 0 68 2 1024 1233 1106 1364 3262 current 7 3 12 current 0.8 21.8 37.9 current	9 0 56 38 1360 823 1015 2700 history1 7 0 21 history1 0.7 14.1 27.3 history1	20 2 45 2 481 1583 702 892 1985 history2 15 2 75 history2 0.6 12.5 25.9 history2

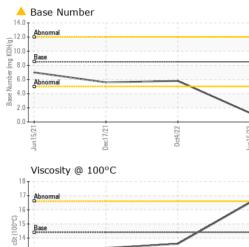


A 12

Jun15/21

OIL ANALYSIS REPORT

VISUAL



Dec17/21,

0ct4/22

White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORMI
Odor	scalar	*Visual	NORML	NORML	NORML	NORM
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	histor
Visc @ 100°C	cSt	ASTM D445	14.4	16.5	13.6	13.3
GRAPHS						
Ferrous Alloys						
80						
70 - nickel						
60-		/				
E ⁵⁰						
		1				
30 -						
20						

Jun15/21-		0ct4/22 -	5/23 .			
Jun1 Dec1		Oct	Jun15/23			
Non-ferrous Metal	s					
30 T						
25 - copper						
anne tin						
20						
<u>۾</u> 15						
E_15 10						
10		Second With The Tankson and address	4.11.11.15			
10- 5-		Research and our of the Content of t				
10- 5- 0-			23			
10 5- 0		Oct4/22	un 15,23			
Junt5/21 0 5 01		064/22	Jun 15/23			
10- 5- 0-		004122		Base Number		
10 5 0 12551un Viscosity @ 100°C		Oct4/22	14.0	T ;		
10 5 0 12/51 un Viscosity @ 100°C		0c41/22	14.0			
Viscosity @ 100°C		064/22	14.0	Abnormal		
10 5 0 125 10 125 10 10 10 10 10 10 10 10 10 10 10 10 10		0044/22	14.0	T ;		
10 5 0 125 10 125 10 10 10 10 10 10 10 10 10 10 10 10 10		064/22	14.0	Abnormal Base		
10 5 0 12/25		064/22	14.0	Abnormal		
10 5 0 10 10 10 10 10 10 10 10 10		064/22	14.0 12.0 (0)HOX 00 bulk 8.0 aquinty age 4.0	Abnormal Base		
10 5 0 1251un Viscosity @ 100°C 10 10 10 10 10 10 10 10 10 10		OctetZZ	14.0 12.0 (0)HOX B0.0 9um W 8.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 80.0 9um W 80.0 9	Abnormal Base		
10 5 0 1225 1255 12			14.0 12.0 (0H00,0) 10,0 0,0 0,0 0,0 0,0 0,0	Abnormal Base Abnormal	21	
10 5 0 1251un Viscosity @ 100°C 10 10 10 10 10 10 10 10 10 10		0ct4/22 0ct4/22	14.0 12.0 (0)HOX B0.0 9um W 8.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 88.0 9um W 80.0 9um W 80.0 9	Abnormal Base Abnormal	Deci 7/21	

: 19 Jul 2023

Diagnostician : Don Baldridge

limit/base

current

method

history1

history2



Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. FosterJ4@RushEnterprises.com * - 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

Report Id: IDECLE [WUSCAR] 05900573 (Generated: 07/19/2023 16:05:22) Rev: 1

Lab Number

Unique Number : 10561929

: 05900573

Submitted By: TECHNICIAN ACCOUNT

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