

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 8344R Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm. 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.

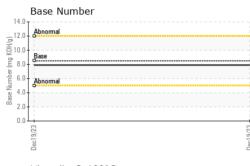
Fluid Condition

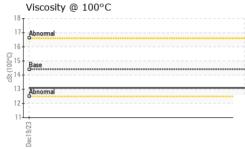
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL06063990		
Sample Date		Client Info		19 Dec 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	62		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250	current 0	history1	history2
	ppm ppm					
Boron		ASTM D5185m	250	0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	0 3		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	0 3 57		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	0 3 57 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	0 3 57 0 938		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	0 3 57 0 938 1015 959 1161	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	0 3 57 0 938 1015 959		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	0 3 57 0 938 1015 959 1161		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	250 10 100 450 3000 1150 1350 4250 limit/base	0 3 57 0 938 1015 959 1161 3492		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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	0 3 57 0 938 1015 959 1161 3492 current	 history1	 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	250 10 100 450 3000 1150 1350 4250 limit/base	0 3 57 0 938 1015 959 1161 3492 current 4	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	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 imit/base >25 >216	0 3 57 0 938 1015 959 1161 3492 current 4 0	 history1	 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 >216 >20	0 3 57 0 938 1015 959 1161 3492 <u>current</u> 4 0 1 1 <u>current</u> 2.5	 history1 	 history2
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	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >216 >20 Imit/base	0 3 57 0 938 1015 959 1161 3492 current 4 0 1 current 2.5 12.4	 history1 history1	 history2 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 Iimit/base >25 >216 >20 Iimit/base >3	0 3 57 0 938 1015 959 1161 3492 <u>current</u> 4 0 1 1 <u>current</u> 2.5	 history1 history1 history1	 history2 history2 history2
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 imit/base >25 >216 >20 imit/base >3 >3	0 3 57 0 938 1015 959 1161 3492 current 4 0 1 current 2.5 12.4	 history1 history1 	history2 history2 history2
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 imit/base >216 >216 >20 imit/base >3 >20 >30	0 3 57 0 938 1015 959 1161 3492 <u>current</u> 4 0 1 <u>current</u> 2.5 12.4 24.7	 history1 history1 history1	 history2 history2 history2
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	250 10 100 450 3000 1150 1350 4250 imit/base >25 >216 >20 imit/base >3 >20 >30	0 3 57 0 938 1015 959 1161 3492 Current 4 0 1 Current 2.5 12.4 24.7 Current	 history1 history1 history1 history1	 history2 history2 history2 history2



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	VISUAL		method	limit/base	current	history1	history2
	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	NONE		
Dec19/23	Appearance	scalar	*Visual	NORML	NORML		
Deci	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	14.4	13.1		
	GRAPHS						
	Ferrous Alloys						
	70 iron						
	60 - chromium						
	50-						
	40						
	^a 30-						
	20-						
	10-						
	0						
	Dec19/23			Dec19/23			
	Dec			Dec			
	Non-ferrous Meta	ls					
	10 copper						
	8 - Beasessesses lead						
	6						
	4						
	2-						
	0						
	0			:19/23			
	Dec19/23			Dec19/23			
	Viscosity @ 100°	C		Dec19/23	Base Number		
	Viscosity @ 100°0	C		EZ/61:390	°T;		
	Viscosity @ 100°	C		14.			
	Viscosity @ 100°	c		14.	0 0 0 0		
	Viscosity @ 100°	C		14.	0 Abnormal 0 Base		
	Viscosity @ 100°	C		14.	Abnormal Base		
	Viscosity @ 100° Abnomal Base Base	C		14.	0 - Abnormal - Base - Abnormal		
	Viscosity @ 100°	C		14. 12. (b) HOX Bull Jack HOX Bull JACK HOX	Abnormal		
	Viscosity @ 100°	C		14. 12. (%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(Abnormal		
	Viscosity @ 100°	C		14. 12. (b) 10. 10. 10. 10. 10. 10. 10. 10.	Abnormal Abnormal Abnormal		
	Viscosity @ 100°	C		14. 12. (%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(%)(Abnormal		
Laboratory Sample No. Lab Number Unique Number	Viscosity @ 100° Viscosity @ 100° Abnormal		d :18. ed :19.	14.1 (0)(HO)(X (0)(HO)(X (0)(X	Abnormal Base Abnormal	CK CENTER - CHI SOUTH CENT	CAGO IDEALEAS IRAL AVENU CHICAGO, I US 6063
Sample No. Lab Number Unique Number Test Package	Viscosity @ 100° Viscosity @ 100° Abnormal	501 Madia Recieved Diagnos Diagnost	d :18. ed :19. tician :We	ry, NC 2751: Jan 2024 Jan 2024 s Davis	Abnormal Base Abnormal Control Control	SOUTH CEN	CAGO IDEALEAS IRAL AVENU CHICAGO, US 6063 : MIKE LINLE
Sample No. Lab Number Unique Number	Viscosity @ 100° Viscosity @ 100° Abnormal	501 Madia Recieved Diagnos Diagnost	d : 18 . ed : 19 . tician : We	ry, NC 2751: Jan 2024 Jan 2024 s Davis	Abnormal Base Abnormal Control Control	SOUTH CEN Contact nleym@rushtru	CAGO IDEALEAS IRAL AVENU CHICAGO, US 6063 : MIKE LINLE

Contact/Location: MIKE LINLEY - IDECHIIL