

OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

TAKEUCHI TL10V2 410007383

Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

				Jan2024			
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		ML0000502			
Sample Date		Client Info		10 Jan 2024			
Machine Age	hrs	Client Info		30			
Oil Age	hrs	Client Info		0			
Oil Changed		Client Info		N/A			
Sample Status				ATTENTION			
CONTAMINATION	1	method	limit/base	current	history1	history2	
Water		WC Method	>0.2	NEG			
Glycol		WC Method		NEG			
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	6			
Chromium	ppm	ASTM D5185m	>20	<1			
Nickel	ppm	ASTM D5185m	>4	<1			
Titanium	ppm	ASTM D5185m		<1			
Silver	ppm	ASTM D5185m	>3	0			
Aluminum	ppm	ASTM D5185m	>20	2			
Lead	ppm	ASTM D5185m	>40	<1			
Copper	ppm	ASTM D5185m	>330	21			
Tin	ppm	ASTM D5185m	>15	1			
Vanadium	ppm	ASTM D5185m		<1			
Cadmium	ppm	ASTM D5185m		0			
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	15			
Barium	ppm	ASTM D5185m	10	2			
Molybdenum	ppm	ASTM D5185m	100	10			
Manganese	ppm	ASTM D5185m		2			
Magnesium	ppm	ASTM D5185m	450	75			
	ppin	ASTIVI DJ TOJITI	400				
Calcium	ppm	ASTM D5185m	3000	2201			
				2201 994			
Calcium Phosphorus Zinc	ppm	ASTM D5185m	3000	-			
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	3000 1150	994			
Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	994 1069			
Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250	994 1069 3808		 	
Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base	994 1069 3808 current	 history1	 history2	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base >25	994 1069 3808 current 12	 history1 	 history2	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158	994 1069 3808 current 12 11	 history1 	 history2 	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20	994 1069 3808 <u>current</u> 12 11 <1	 history1 	 history2 	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	3000 1150 1350 4250 limit/base >25 >158 >20 >5	994 1069 3808 current 12 11 <1 0.3	 history1 	 history2 	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >5 limit/base	994 1069 3808 current 12 11 <1 0.3 current	 history1 history1	 history2 history2	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 <i>limit/base</i> >25 >158 >20 >5 <i>limit/base</i> >3	994 1069 3808 <u>current</u> 12 11 <1 0.3 <u>current</u> 0	 history1 history1 	 history2 history2 history2	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm % % % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	3000 1150 1350 4250 <i>limit/base</i> >25 >158 >20 <i>limit/base</i> >3 >20	994 1069 3808 <u>current</u> 12 11 <1 0.3 <u>current</u> 0 5.3	 history1 history1 history1	 history2 history2 history2 	
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm % % % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7844 *ASTM D7844	3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base >3 >20 >3 >20	994 1069 3808 <u>current</u> 12 11 <1 0.3 <u>current</u> 0 5.3 16.4	 history1 history1 history1	 history2 history2 	



OIL ANALYSIS REPORT

Fuel Dilution			VISUAL		method	limit/base	current	history1	history2
Smarr			White Metal	scalar	*Visual	NONE	NONE		
8.0 - Severe			Yellow Metal	scalar	*Visual	NONE	NONE		
을 6.0 - Abnormal			Precipitate	scalar	*Visual	NONE	NONE		
^{8°} 4.0			Silt	scalar	*Visual	NONE	NONE		
2.0			Debris	scalar	*Visual	NONE	NONE		
0.0		-	Sand/Dirt	scalar	*Visual	NONE	NONE		
		0/24	Appearance	scalar	*Visual	NORML	NORML		
Jan10/24		Jan 10/24	Odor	scalar	*Visual	NORML	NORML		
Evel Dilution			Emulsified Water	scalar	*Visual	>0.2	NEG		
Fuel Dilution			Free Water	scalar	*Visual		NEG		
8.0 - Severe			FLUID PROPER	ΓIES	method	limit/base	current	history1	history2
e.0 Bandaria			Visc @ 100°C	cSt	ASTM D445		11.4		
⁴ ² 4.0			GRAPHS						
2.0-			Ferrous Alloys						
0.0		=	¹⁰ T						
Jan 10/24		V Cr U I	iron 8+						
Jan		1	nickel						
Base Number		E	6-						
14.0 T		bbu	4						
12.0 - Abnormal									
Base Base Base Base Base Abnormal			2						
E 8.0			0						
Abnormal v 4.0			Jan 10/24			Jan 10/24			
2.0-			Jan			Jan			
0.0		v .	Non-ferrous Meta	ls					
Jan 10/24		C/U1	copper						
2		-	20 - tin						
			15+						
		bbm							
			10-						
			5-						
			lan 10/24			an 10/24			
			✓ Viscosity @ 100°C			7			
						14.0	Base Number		
			17- Abnormal			12.0	Abnormal		
			16						
		C)	15 Base			5 10.0 ·	Base		
		cSt (100°C)	14			(0)10.0- HOX B 8.0- back Momper 6.0- seg 4.0-			
		3	Abnormal			10.0-	Abnormal		
			12-						
			11-			2.0			
			754				/24 +		/24
			Jan 10/24			Jan 10/24	Jan 10/24		Jan 10/24
	Laborator Sample N Lab Numl Unique Num Certificate 12367 To discuss this sample rep	ber : 0 ber : 0 ber : 1 age : 0	10831923 CONST (Additional T	Recei Teste Diagr ests: Fue	ived : 16 d : 18 nosed : 18 eIDilution, Pe	6 Jan 2024 8 Jan 2024 Jan 2024 - Don E ercentFuel, TB	Baldridge N)	GLE	NTAIN ROAD N ALLEN, VA US 23060 LE RATLIFFE
	* - Denotes test methods t Statements of conformity t	hat are	e outside of the ISO 1	7025 scc	pe of accred	litation.			-LOGAN.COM T: 804)266-1611

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