

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

TAKEUCHI TL8 408003107

Component Diesel Engine Fluid VALVOLINE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ML0946557		
Sample Date		Client Info		10 Jun 2024		
Machine Age	hrs	Client Info		50		
Oil Age	hrs	Client Info		50		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	۷	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	21		
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	3		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	78		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	0.00	AOTH DEADE				
Gaumum	ppm	ASTM D5185m		0		
ADDITIVES	ppm	method	limit/base	0 current	 history1	history2
	ppm		limit/base 39	-		
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	39	current 42	history1 	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	39 1	current 42 0	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	39 1 49 1 616	current 42 0 40	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	39 1 49 1 616 1554	Current 42 0 40 2 619 1703	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	39 1 49 1 616 1554 899	Current 42 0 40 2 619 1703 783	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069	Current 42 0 40 2 619 1703 783 954	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	39 1 49 1 616 1554 899 1069 2624	Current 42 0 40 2 619 1703 783	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	39 1 49 1 616 1554 899 1069	Current 42 0 40 2 619 1703 783 954	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624	Current 42 0 40 2 619 1703 783 954 2991 Current 11	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 limit/base >25	current 42 0 40 2 619 1703 783 954 2991 current 11 4	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 limit/base	Current 42 0 40 2 619 1703 783 954 2991 Current 11	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 limit/base >25	current 42 0 40 2 619 1703 783 954 2991 current 11 4 4 Current	history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 2624 2624 25 >25 >20	current 42 0 40 2 619 1703 783 954 2991 current 11 4 4 0 0.2	history1 history1	history2 history2
ADDITIVES 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	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25 20 <i>limit/base</i> >3 >20	current 42 0 40 2 619 1703 783 954 2991 current 11 4 0 0.2 10.7	history1 history1 history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 2624 2624 25 >25 >20	current 42 0 40 2 619 1703 783 954 2991 current 11 4 4 0 0.2	history1 history1 history1 history1 history1 history1	history2 history2 history2 history2 history2
ADDITIVES 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	method ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25 20 <i>limit/base</i> >3 >20	current 42 0 40 2 619 1703 783 954 2991 current 11 4 0 0.2 10.7	history1 history1 history1 history1 history1	history2 history2 history2
ADDITIVES 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	method ASTM D5185m ASTM D5185m	39 1 49 1 616 1554 899 1069 2624 imit/base >25 imit/base >3 >20 >3 >30	current 42 0 40 2 619 1703 783 954 2991 current 11 4 0.2 10.7 21.9	history1 history1 history1	history2 history2 history2 history2



OIL ANALYSIS REPORT

FT-IR (Direct Trer	nd)		VISUAL		method	limit/base	current	history1	history2
Oxidation			White Metal	scalar	*Visual	NONE	NONE		
Suffation			Yellow Metal	scalar	*Visual	NONE	NONE		
B ²⁵ - Abnormal B ²⁵ - Abnormal		-	Precipitate	scalar	*Visual	NONE	NONE		
₽ ₂₀			Silt	scalar	*Visual	NONE	NONE		
15			Debris	scalar	*Visual	NONE	NONE		
10			Sand/Dirt	scalar	*Visual	NONE	NONE		
0/24		Jun10/24 -	Appearance	scalar	*Visual	NORML	NORML		
Jun 10/24		Jun1	Odor	scalar	*Visual	NORML	NORML		
Viscosity @ 40°C			Emulsified Water	scalar	*Visual	>0.2	NEG		
120 T			Free Water	scalar	*Visual		NEG		
100 - Base Base 80 -			FLUID PROPER	ΓIES	method	limit/base	current	history1	history2
(), 60 (), 60 t; 40			Visc @ 100°C	cSt	ASTM D445	13.6	14.7		
			GRAPHS						
20		1	Ferrous Alloys						
-20			25 T						
Jun 10/24		Jun10/24	20 - chromium						
luul		Junl	20 nickel						
Viscosity @ 100°C	C	F	15						
¹⁸ T			10						
17- Abnormal									
16			5-						
00 15 - 11 - Base			0						
10			Jun10/24			0/24			
13 Abnormal			luul			Jun10/24			
11			Non-ferrous Meta	ls					
Jun10/24		VG/UT.	80 copper]						
Lun			/U - management lead						
Viscosity @ 40°C			60 - 50						
120			40						
100 - Abnormal Base 80 - Abnormal		10	30 -						
00			20 -						
() 060 - 170 - 170 -			10-						
20			0						
0-			un 10/24			un10/24			
-20			~			Jun			
Jun 10/24	Viscosity @ 100°C Base								
J.		-				9.0			
			17- Abnormal			8.0· = 7.0.	Base		
		_	16			(B7.0- B/HOX 6.0- JUN 5.0-			
		251 (100°C)	15			<u>ڦ</u> 5.0-			
		152	Base			4.0- M			
			13 - Abnormal			2.0-			
			12			1.0			
			11			0.0			
			Jun 10/24			Jun 10/24	Jun 10/24		Jun10/24
			Jun			Jun	Jur		Jun
	Certificate 12367 To discuss this same * - Denotes test meta	nple No. : Number : ue Number : t Package : pple report, cu thods that ar	11075966 CONST (Additional T ontact Customer Serv e outside of the ISO 1	Recei Teste Diagn Tests: TBI ice at 1-8 7025 sco	ved : 13 d : 14 losed : 14 N, KV40) 00-237-1369 pe of accred	3 Jun 2024 1 Jun 2024 Jun 2024 - Don 1 9. <i>Ditation.</i>	Baldridge jr	FREDERIC Contact: J neadows@mcclu	8 KINGS HWY CKSBURG, VA US 22405 W MEADOWS ung-logan.com T:
	Statements of confo	ormity to spe	cifications are based o	on the sin	nple accepta	nce decision i	rule (JCGM 106	:2012)	F:

Contact/Location: JW MEADOWS - MCCFRE