

Machine Id 2006014621 Component Port Diesel Engine Fluid SAE 15W40 (--- GAL)

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.

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Aluminum ppm levels are severe. Piston wear is indicated.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDI	TION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WA0021449		
Sample Date		Client Info		02 Jun 2024		
Machine Age	hrs	Client Info		936		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Filter Changed		Client Info		Not Changd		
Sample Status				SEVERE		
Iron	ppm	ASTM D5185(m)	>80	74		
Chromium	ppm	ASTM D5185(m)	>6	6		
Nickel	ppm	ASTM D5185(m)	>2	<1		
Titanium	ppm	ASTM D5185(m)	>2	0		
Silver	ppm	ASTM D5185(m)	>2	0		
Aluminum	ppm	ASTM D5185(m)	>20	1 65		
Lead	ppm	ASTM D5185(m)	>95	<1		
Copper	ppm	ASTM D5185(m)	>85	2		
Tin	ppm	ASTM D5185(m)	>9	0		
Vanadium	ppm	ASTM D5185(m)		0		
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Silicon	nom	ASTM D5185(m)	>25	4		
Potassium	ppm	ASTM D5185(m)	>20	4		
Fuel	ppm	WC Method	>4.0	4 <1.0		
Water		WC Method	>0.1	NEG		
Glycol	%	ASTM D7922*	20.1	0.0		
Soot %	%	ASTM D7844*		0.0		
Nitration	Abs/cm	ASTM D7624*	>20	4.4		
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.1		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	VLITE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.1	NEG		
Sodium	ppm	ASTM D5185(m)	>57	66		
Boron	ppm	ASTM D5185(m)		2		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		58		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)		976		
Calcium	ppm	ASTM D5185(m)		1038		
Phosphorus	ppm	ASTM D5185(m)		987		
Zinc	ppm	ASTM D5185(m)		1135		
Sulfur	ppm	ASTM D5185(m)		2586		
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.6		
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	14.7		



