

Machine Id HINO BX-3 Component Diesel Engine Fluid GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Sample Number		Client Info		WC0941056		
	Sample Date		Client Info		03 Jul 2024		
	Machine Age	hrs	Client Info		12746		
	Oil Age	hrs	Client Info		600		
	Filter Age	hrs	Client Info		600		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR All component wear rates are normal.							
	Iron	ppm	ASTM D5185m		17		
	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m	>4	<1		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m		<1		
	Aluminum	ppm	ASTM D5185m	>20	6		
	Lead	ppm	ASTM D5185m	>40	2		
	Copper	ppm	ASTM D5185m		5		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	nnm	ASTM D5185m	> 25	5		
CONTAMINATION	Potassium	ppm	ASTM D5185m		5 <u> 102</u>		
Sodium and/or potassium levels are high.	Fuel	ppm	WC Method		<1.0		
	Water		WC Method		×1.0		
		%	*ASTM D2982	>0.2	NEG		
	Glycol Soot %			. 0			
		%	*ASTM D7844		0.8		
	Nitration	Abs/cm	*ASTM D7624 *ASTM D7415	>20	11.4		
	Sulfation	Abs/.1mm			20.0		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		19		
	Boron	ppm	ASTM D5185m		3		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	in the Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m	66	68		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m	1000	849		
	Calcium	ppm	ASTM D5185m		1201		
	Phosphorus	ppm	ASTM D5185m		980		
	Zinc		ASTM D5185m		1123		
	Sulfur	ppm	ASTM D5185m	1270	3329		
		ppm		> 2E			
	Oxidation	Abs/.1mm	*ASTM D7414		17.9		
	Base Number (BN)	ing KOH/g	ASTM D2896	10.1	7.4		

Visc @ 100°C cSt

ASTM D445 15.5

13.9



