



LIEBHERR R914 053852-1511

Hydraulic System

PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.	Sample Number		Client Info		LH0287898		
	Sample Date		Client Info		26 Apr 2024		
	Machine Age	hrs	Client Info		529		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		N/A		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)	>50	7		
	Chromium	ppm	ASTM D5185(m)		<1		
All component wear rates are normal.	Nickel	ppm	ASTM D5185(m)		0		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)		0		
	Aluminum	ppm	ASTM D5185(m)	>8	<1		
	Lead	ppm	ASTM D5185(m)		<1		
	Copper	ppm	ASTM D5185(m)		11		
	Tin	ppm	ASTM D5185(m)		0		
	Vanadium	ppm	ASTM D5185(m)		0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.	Silicon	ppm	ASTM D5185(m)		6		
	Potassium	ppm	ASTM D5185(m)		1		
	Water		WC Method		NEG		
	Particles >4µm		ASTM D7647		19958		
	Particles >6µm		ASTM D7647		4940		
	Particles >14µm		ASTM D7647		521		
	Particles >21µm		ASTM D7647 ASTM D7647		145 7		
	Particles >38µm Particles >71µm		ASTM D7647 ASTM D7647		1		
	Oil Cleanliness		ISO 4406 (c)		21/19/16		
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.1	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		1		
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		<1		
	Barium	ppm	ASTM D5185(m)		<1		
	Molybdenum	ppm	ASTM D5185(m)		0		
	Manganese	ppm	ASTM D5185(m)		<1		
	Magnesium	ppm	ASTM D5185(m)		4		
	Calcium	ppm		100	1413		
	Phosphorus	ppm	ASTM D5185(m)		597		
	Zinc	ppm	ASTM D5185(m)		684		
	Sulfur	ppm	ASTM D5185(m)	1600	4247		

Visc @ 40°C

cSt

ASTM D7279(m) 47.9

44.0



