

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION ABNORMAL

Machine Id HITACHI LR19-114 Component Transmission Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA DURON SHP 10W30, however, a fluid match indicates that this fluid is SAE 20 Diesel Engine Oil. Please confirm the fluid type and grade on your next sample.

WEAR

All component wear rates are normal.

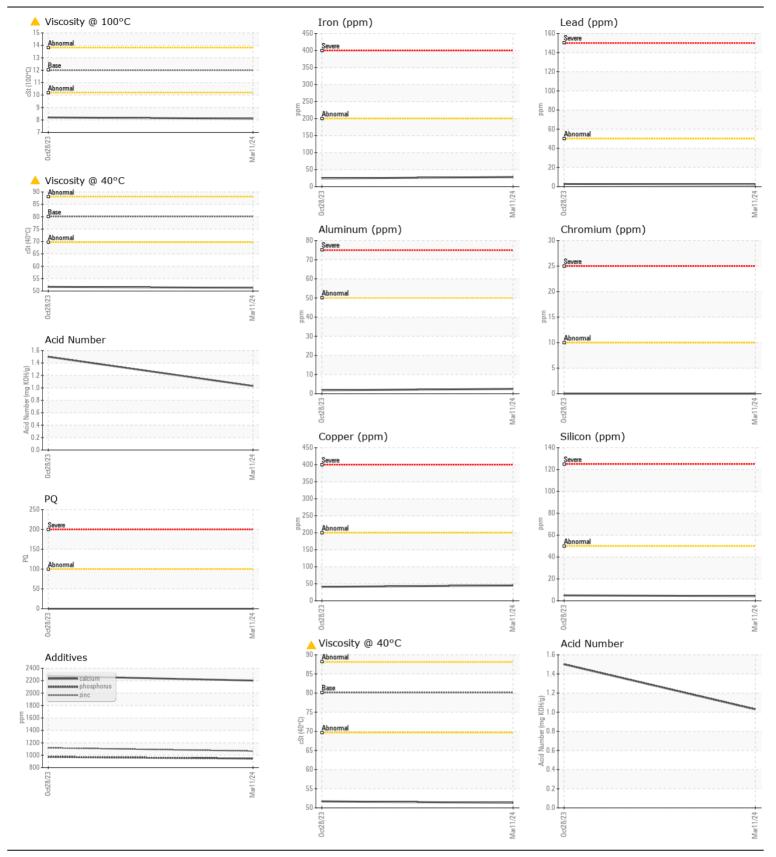
CONTAMINATION

There is no indication of any contamination in the fluid.

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0068898	PC0068844	
Sample Date		Client Info		11 Mar 2024	28 Oct 2023	
Machine Age	hrs	Client Info		3132	2794	
Oil Age	hrs	Client Info		863	524	
Filter Age	hrs	Client Info		863	0	
Oil Changed		Client Info		Changed	Not Changd	
Filter Changed		Client Info		Changed	Not Changd	
Sample Status				ABNORMAL	ABNORMAL	
PQ		ASTM D8184*		0	0	
Iron	ppm	ASTM D5185(m)	>200	28	24	
Chromium	ppm	ASTM D5185(m)	>10	0	0	
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	<1	
Aluminum	ppm	ASTM D5185(m)	>50	2	2	
Lead	ppm	ASTM D5185(m)	>50	2	3	
Copper	ppm	ASTM D5185(m)	>200	- 45	41	
Tin	ppm	ASTM D5185(m)	>10	<1	<1	
Vanadium	ppm	ASTM D5185(m)		0	0	
White Metal	scalar	Visual*	NONE	NONE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Silicon	ppm	ASTM D5185(m)	>50	4	5	
Silicon Potassium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	>50 >20	4 <1	5 0	
Potassium Water	ppm	ASTM D5185(m) WC Method	>20 >0.1	<1 NEG	0 NEG	
Potassium Water Silt	ppm scalar	ASTM D5185(m) WC Method Visual*	>20 >0.1 NONE	<1 NEG NONE	0 NEG NONE	
Potassium Water Silt Debris	ppm scalar scalar	ASTM D5185(m) WC Method Visual* Visual*	>20 >0.1 NONE NONE	<1 NEG NONE NONE	0 NEG NONE NONE	
Potassium Water Silt Debris Sand/Dirt	ppm scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual*	>20 >0.1 NONE NONE NONE	<1 NEG NONE NONE NONE	0 NEG NONE NONE NONE	
Potassium Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >0.1 NONE NONE NORE	<1 NEG NONE NONE NONE NORML	0 NEG NONE NONE NONE NORML	
Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >0.1 NONE NONE NORML NORML	<1 NEG NONE NONE NORE NORML	0 NEG NONE NONE NORML NORML	
Potassium Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >0.1 NONE NONE NORE	<1 NEG NONE NONE NONE NORML	0 NEG NONE NONE NONE NORML	
Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >0.1 NONE NONE NORML NORML	<1 NEG NONE NONE NORE NORML	0 NEG NONE NONE NORML NORML	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual*	>20 >0.1 NONE NONE NORML NORML	<1 NEG NONE NONE NORML NORML NEG	0 NEG NONE NONE NORML NORML NEG	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1	<1 NEG NONE NONE NORML NORML NEG	0 NEG NONE NONE NORML NORML NEG 2	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1	<1 NEG NONE NONE NORML NORML NEG 2 2	0 NEG NONE NONE NORML NORML NEG 2 2	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1	<1 NEG NONE NONE NORML NORML NEG 2 2 2 2 2 38 0	0 NEG NONE NONE NORML NORML NEG 2 2 2 <1	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML >0.1 2 0 50 0 950	<1 NEG NONE NONE NORML NORML NEG 2 2 2 2 <1 38	0 NEG NONE NONE NORML NORML NEG 2 2 2 2 4 1 39 0 0 613	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML >0.1 2 0 50 0 950 1050	<1 NEG NONE NONE NORML NORML NEG 2 2 2 2 <1 38 0 607 2202	0 NEG NONE NONE NORML NORML NEG 2 2 2 2 2 39 0 613 0 2275	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1 2 0 50 0 50 0 950 1050 9955	<1 NEG NONE NONE NORML NORML NEG 2 2 2 38 0 607 2202 946	0 NEG NONE NONE NORML NORML NEG 2 2 2 2 39 0 613 2275 973	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1 2 0 50 0 50 0 50 0 950 1050 995 1180	<1 NEG NONE NONE NORML NORML NEG 2 2 2 3 1 38 0 607 2202 946 1067	0 NEG NONE NONE NORML NORML NEG 2 2 2 41 39 0 613 0 613 2275 973 1119	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML NORML >0.1 2 0 50 0 50 0 950 1050 9955	<1 NEG NONE NONE NORML NEG 2 2 2 2 38 0 607 2202 946 1067 2994	0 NEG NONE NONE NORML NORML NEG 2 2 2 2 2 4 1 39 0 613 2275 973 1119 3197	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Acid Number (AN)	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML >0.1 2 0 50 0 50 0 950 1050 995 1180 2600	<1 NEG NONE NONE NORML NEG 2 2 2 2 38 0 607 2202 946 1067 2994 1.03	0 NEG NONE NONE NORML NORML 22 2 2 41 39 0 613 2275 973 1119 3197 1.50	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Barium Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Acid Number (AN)	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML >0.1 2 0 50 0 50 0 950 1050 995 1180 995 1180 2600	<1 NEG NONE NORML NORML NORML 2 2 2 <1 38 0 607 2202 946 1067 2994 1.03 \$1.3	0 NEG NONE NONE NORML NORML 2 2 2 2 4 1 39 0 613 0 613 2275 973 1119 3197 1.50 ▲ 51.7	
Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Acid Number (AN)	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 NONE NONE NORML >0.1 2 0 50 0 50 0 950 1050 995 1180 2600	<1 NEG NONE NONE NORML NEG 2 2 2 2 38 0 607 2202 946 1067 2994 1.03	0 NEG NONE NONE NORML NORML 22 2 2 41 39 0 613 2275 973 1119 3197 1.50	



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GUY J BAILEY LTD** CALA 日常 . Sample No. Received HIGHWAY 410 : PC0068898 : 03 Apr 2024 Lab Number : 02626447 Tested BAIE VERTE, NL :04 Apr 2024 ISO 17025:2017 Accredited Unique Number : 5759579 Diagnosed : 04 Apr 2024 - Kevin Marson CA A0K 1B0 Laboratory Test Package : MOB 2 (Additional Tests: KV100, PQ, VI) Contact: Kirk Martin To discuss this sample report, contact Customer Service at 1-800-268-2131. kmartin@guyjbailey.net T: Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: Validity of results and interpretation are based on the sample and information as supplied.