WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL



LIEBHERR LH40M 146308-1215

Swing Drive

Test	PETRO CANADA TRAXON SY	NTHETIC 75	W90	(GAL)			
Confirm the source of the lubricant being utilized for top-up/fill. Sample Number Client Into Client Into	RECOMMENDATION	Test	UOM	Method	I imit/Abn	Current	History1	History2
Sample at the next service interval to monition. Machine Age Institute Stitute Stitute	Confirm the source of the lubricant being utilized for top-up/fill.		OOM		Little/tori			
Machine Age		•						
Oil Age hrs Client Info Oi			hrs					
Filter Age		_						
Clichanged Client Info Changed Cha		-						
Filter Changed Common Co		ū						
Normal N		•						
Iron								
All component wear rates are normal.								
Nickel ppm ASTIL DOISS 5 -1 Titanium ppm ASTIL DOISS 5 0 0 Silver ppm ASTIL DOISS 5 2 Aluminum ppm ASTIL DOISS 5 2 Copper ppm ASTIL DOISS 5 5 2 Aluminum ppm ASTIL DOISS 5 5 1 Vanadium ppm ASTIL DOISS 5 5 1 Vanadium ppm ASTIL DOISS 5 5 1 Vanadium ppm ASTIL DOISS 5 5 1 Valow Metal scalar Visual* NONE NONE Valow Metal scalar Visual* NONE NONE Potassium ppm ASTIL DOISS 5 7 Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NORM Appearance scalar Visual* NORM NORM Appearance scalar Visual* NORM NORM 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. FUID CONDITION Additive levels indicate the addition of a different brand, or type of oil, Manganesse ppm ASTIL DOISS 1 1 1 Additive levels indicate the addition of a different brand, or type of oil, Manganesse ppm ASTIL DOISS 1 1 1 Amagnesium ppm ASTIL DOISS 1 1 1 Amagnesium ppm ASTIL DOISS 1 1 1 Amagnesium ppm ASTIL DOISS 1 1 1 Amagnesium ppm ASTIL DOISS 1 1 1 Amagnesium ppm ASTIL DOISS 1 1 1	WEAR	Iron	ppm	ASTM D5185(m)	>350	344		
Titanium ppm ASTM D5185 m 0 Silver ppm ASTM D5185 m 0 0 Aluminum ppm ASTM D5185 m 5 2 Lead ppm ASTM D5185 m 5 2 Copper ppm ASTM D5185 m 5 2 Copper ppm ASTM D5185 m 5 3 Tin ppm ASTM D5185 m 5 5 1 1 Vanadium ppm ASTM D5185 m 5 5 1 1 White Metal scalar Visual* NONE LIGHT White Metal scalar Visual* NONE LIGHT Water WC Method 50.2 NEG Silt scalar Visual* NONE NONE Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE	All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>15	2		
Silver		Nickel	ppm	ASTM D5185(m)	>5	<1		
Aluminum ppm ASTM D5185ml 5-5 2 Lead ppm ASTM D5185ml 5-10 3 3 Coper ppm ASTM D5185ml 5-10 3 3 Tin ppm ASTM D5185ml 5-15 11 Vanadium ppm ASTM D5185ml 5-15 11 Vanadium ppm ASTM D5185ml 5-15 11 Vanadium ppm ASTM D5185ml 5-15 7 Vanadium ppm ASTM D5185ml 5-15 7 Valuar Visual* NONE NONE NONE Valuar Visual* NONE		Titanium	ppm	ASTM D5185(m)		0		
Lead		Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM DS185 m >300 115 Tin ppm ASTM DS185 m >15 11 Vanadium ppm ASTM DS185 m >15 11 Vanadium ppm ASTM DS185 m >10 Vanadium ppm ASTM DS185 m >10 Vanadium ppm ASTM DS185 m >10 Vanadium ppm ASTM DS185 m >15 7 Vanadium ppm ASTM DS185 m >15 7 Vanadium ppm ASTM DS185 m >15 7 Value Potassium ppm ASTM DS185 m >15 7 Value Potassium ppm ASTM DS185 m >10 Potassium ppm Potassium ppm		Aluminum	ppm	ASTM D5185(m)	>5	2		
Tin		Lead	ppm	ASTM D5185(m)	>10	3		
Vanadium ppm ASTM D5185/m NONE LIGHT NONE NO		Copper	ppm	ASTM D5185(m)	>300	115		
White Metal scalar Visual* NONE LIGHT		Tin	ppm	ASTM D5185(m)	>15	11		
Yellow Metal scalar Visual* NONE N		Vanadium	ppm	ASTM D5185(m)		0		
Silicon ppm ASTM DS185(m) > 15 7		White Metal	scalar	Visual*	NONE	LIGHT		
Potassium ppm ASTM D5185(m) >20 2		Yellow Metal	scalar	Visual*	NONE	NONE		
Water WC Method >0.2 NEG	CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>15	7		
Water WC Method >0.2 NEG Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML NORML NORML NORML NORML Debris scalar Visual* NONE NONE Appearance scalar Visual* NORML	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	2		
Debris Scalar Visual* NONE NORML N		Water		WC Method	>0.2	NEG		
Sand/Dirt scalar Visual* NONE NORML NORML		Silt	scalar	Visual*	NONE	NONE		
Appearance Scalar Visual* NORML NORM		Debris	scalar	Visual*	NONE	NONE		
Odor		Sand/Dirt	scalar	Visual*	NONE	NONE		
Emulsified Water scalar Visual* >0.2 NEG		Appearance	scalar	Visual*	NORML	NORML		
Sodium ppm ASTM D5185(m) 6		Odor	scalar	Visual*	NORML	NORML		
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) 328 8		Emulsified Water	scalar	Visual*	>0.2	NEG		
The condition of the oil is acceptable for the time in service. Barium ppm ASTM D5185(m) 1 10 Molybdenum ppm ASTM D5185(m) 3 Magnesium ppm ASTM D5185(m) 7 15 Calcium ppm ASTM D5185(m) 7 15 Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021	FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		6		
Barium ppm ASTM D5185(m) 1 10 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 3 Magnesium ppm ASTM D5185(m) 1 1 Calcium ppm ASTM D5185(m) 7 15 Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021		Boron	ppm	ASTM D5185(m)	328	8		
Manganese ppm ASTM D5185(m) 3 Magnesium ppm ASTM D5185(m) 1 1 Calcium ppm ASTM D5185(m) 7 15 Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021			ppm	. ,	1			
Magnesium ppm ASTM D5185(m) 1 1 Calcium ppm ASTM D5185(m) 7 15 Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021		Molybdenum	ppm	ASTM D5185(m)				
Calcium ppm ASTM D5185(m) 7 15 Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021		Manganese	ppm	ASTM D5185(m)		3		
Phosphorus ppm ASTM D5185(m) 1145 2209 Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021		-	ppm					
Zinc ppm ASTM D5185(m) 3 34 Sulfur ppm ASTM D5185(m) 17909 25021			ppm		7			
Sulfur ppm ASTM D5185(m) 17909 25021			ppm					
			ppm	. ,				
Visc @ 40°C cSt ASTM D7279(m) 99.6 173								
		Visc @ 40°C	cSt	ASTM D7279(m)	99.6	173		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number **Unique Number**

: LH0281089 : 02607269 : 5708355 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Recieved : 08 Jan 2024 : 08 Jan 2024 Diagnosed

Diagnostician : Kevin Marson

RICHMOND STEEL RECYCLING

955 ORD ROAD KAMLOOPS, BC CA V2B 7B5

Contact: Service Manager

T: F:

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.