WEAR CONTAMINATION FLUID CONDITION

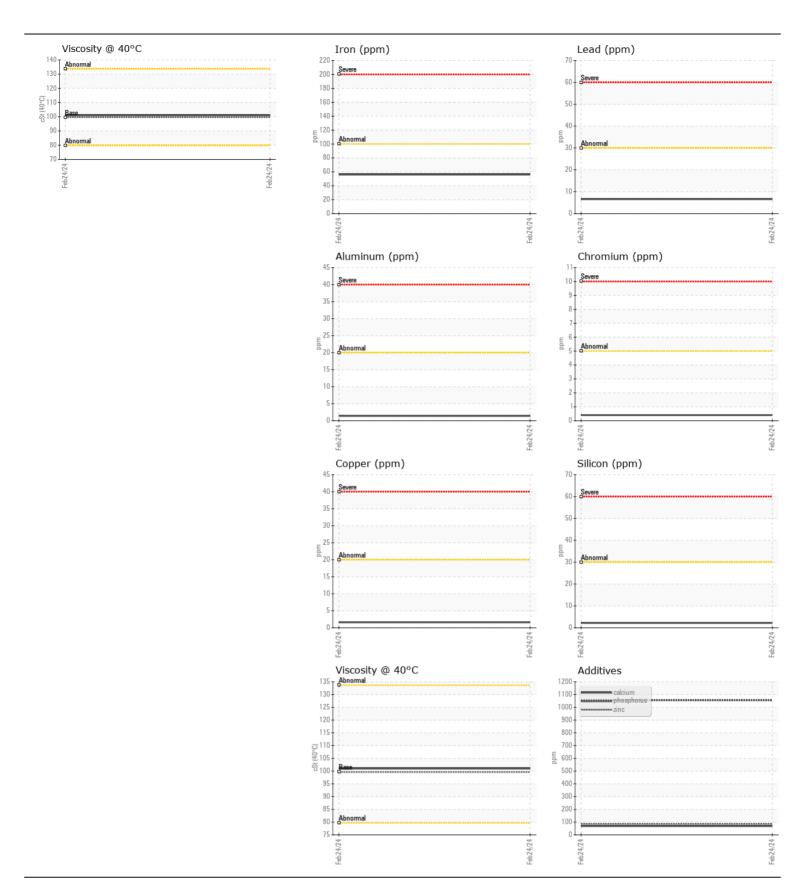
NORMAL NORMAL



LIEBHERR LH60 096587

Component **Splitter Box**

Test	PETRO CANADA TRAXON 75\	N90 SYNTH	ETIC	(GAL)	.,		
Resample at the next service interval to monitor. Sample Number Cilient Info 1676 24 Feb 2024	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Client Info Color 1676 Color C		Sample Number		Client Info				
		Sample Date		Client Info		24 Feb 2024		
Filter Age		Machine Age	hrs	Client Info		11676		
Cilcut Info		Oil Age	hrs	Client Info		0		
Filter Changed Sample Status		Filter Age	hrs	Client Info		0		
Nome		Oil Changed		Client Info		Changed		
Iron		Filter Changed		Client Info		N/A		
All component wear rates are normal. Chromium ppm ASTM DSISS 5 0 Nickel ppm ASTM DSISS 5 0 Titanium ppm ASTM DSISS 0 Silver ppm ASTM DSISS 0 Silver ppm ASTM DSISS 20 1 Aluminum ppm ASTM DSISS 20 1 Lead ppm ASTM DSISS 20 2 Copper ppm ASTM DSISS 20 2 Tin ppm ASTM DSISS 30 2 Tin ppm ASTM DSISS 30 2 There is no indication of any contamination in the oil. CONTAMINATION Silicon ppm ASTM DSISS 30 2 Water WC Method 20.1 NONE NONE Debris Scalar Visual* NONE NONE Silt Scalar Visual* NONE NONE Sand/Dirt Scalar Visual* NONE NONE Appearance Scalar Visual* NONE NONE Emulsified Water Scalar Visual* NONE NONE Emulsified Water Scalar Visual* NONE NORE Barium ppm ASTM DSISS 1 0 Molybdenum ppm ASTM DSISS 1 0 Magnesium ppm ASTM DSISS 1 0 Phosphorus ppm ASTM DSISS 1 1 0 Phosphorus ppm ASTM DSISS 1 1 0 Phosphorus ppm ASTM DSISS 1 1 0 Suffur ppm ASTM DSISS 1 1 0 Suffur ppm ASTM DSISS 1 1 0 Phosphorus ppm ASTM DSISS 1 1 0 Suffur ppm ASTM DSISS 1 1 0 Phosphorus ppm ASTM DSISS 1 1 0		Sample Status				NORMAL		
Nickel ppm ASTM 05185m >5 0 Titanium ppm ASTM 05185m 0 0 ASTM 05185m 20 1 ASTM 05185m 20 1 ASTM 05185m 20 1 ASTM 05185m 20 1 Lead ppm ASTM 05185m 20 2 Copper ppm ASTM 05185m >10 0 Copper ppm ASTM 05185m >10 0 ASTM 05185m >20 2 ASTM 05185m >20 11 ASTM 05185m >20 2 ASTM 05185m >20	WEAR	Iron	ppm	ASTM D5185(m)	>100	56		
Nickel ppm ASTM05185(m) >5 0 Titanium ppm ASTM05185(m) 0 Sliver ppm ASTM05185(m) >20 1 Lead ppm ASTM05185(m) >20 1 Lead ppm ASTM05185(m) >20 7 Copper ppm ASTM05185(m) >20 2 Tin ppm ASTM05185(m) >20 2 Tin ppm ASTM05185(m) >0 0 Vanadium ppm ASTM05185(m) >0 0 Vanadium ppm ASTM05185(m) >0 0 Vanadium ppm ASTM05185(m) >0 0 Vallow Metal scalar Visual* NONE NONE Vellow Metal scalar Visual* NONE NONE Vallow Metal scalar Visual* NONE NONE Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE NONE Appearance scalar Visual* NONE Appearance scalar Visual* NONE .	All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>5	<1		
Silver		Nickel	ppm	ASTM D5185(m)	>5	0		
Aluminum ppm ASTM DSISS m >20 1		Titanium	ppm	ASTM D5185(m)		0		
Lead		Silver	ppm	ASTM D5185(m)		0		
Copper		Aluminum	ppm	ASTM D5185(m)	>20	1		
Tin		Lead	ppm	ASTM D5185(m)	>30	7		
Vanadium ppm ASTM_DS185(m) 0 White Metal scalar Visual* NONE NONE Yellow Metal scalar Visual* NONE NONE Yellow Metal scalar Visual* NONE NONE There is no indication of any contamination in the oil. Silicon ppm ASTM_DS185(m) >20 11 Water WC Method >0.1 NEG Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance Scalar Visual* NONE NONE Appearance Scalar Visual* NORML NORML NORML NORML NORML Debris Scalar Visual* NONE NORML N		Copper	ppm	ASTM D5185(m)	>20	2		
White Metal Scalar Visual* NONE NO		Tin	ppm	ASTM D5185(m)	>10	0		
Yellow Metal scalar Visual* NONE N		Vanadium	ppm	ASTM D5185(m)		0		
Silicon ppm ASTM D5185(m) >30 2		White Metal	scalar	Visual*	NONE	NONE		
Potassium ppm ASTM D5185(m) >20 11 Water WC Method >0.1 NEG Silt scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML NORML Appearance scalar Visual* NORML NORML NORML Ddor scalar Visual* NORML NORML NORML Emulsified Water scalar Visual* >0.1 NEG Ddor Scalar Visual* NORML NORML NORML Ddor Scalar Visual* NORML NORML Ddor Scalar Visual* >0.1 NEG Ddor Scalar Visual* NORML NORML Ddor Scalar Visual* NORML NORML Ddor Scalar Visual* NORML NORML Ddor Scalar Visual* NORML NORML		Yellow Metal	scalar	Visual*	NONE	NONE		
Potassium ppm ASTM D5185(m) >20 11 Water WC Method >0.1 NEG Silt scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML NORML Appearance scalar Visual* NORML NORML NORML Ddor scalar Visual* NORML NORML NORML Ddor Ddor NORML NORML Ddor Ddor Ddor Ddor Ddor Ddor Ddor	CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>30	2		
Water WC Method >0.1 NEG Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML NORML Appearance scalar Visual* NORML NORML NORML Debris scalar Visual* NONE NONE NONE Appearance scalar Visual* NORML NORML NORML Debris scalar Visual* NONE NONE NORML NORML Molybide Sodium ppm ASTM D5185(m) >25 4 Boron ppm ASTM D5185(m) 328 83 Manganese ppm ASTM D5185(m) 41 0 Manganese ppm ASTM D5185(m) 41 Manganesium ppm ASTM D5185(m) 7 69 Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 17909 18518	There is no indication of any contamination in the oil	Potassium	ppm	ASTM D5185(m)	>20	11		
Debris Scalar Visual* NONE NORML NORML	There is no indication of any contamination in the oil.	Water		WC Method	>0.1	NEG		
Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML NORML Odor scalar Visual* NORML NORML NORML Emulsified Water scalar Visual* Visual* NORML NORML Emulsified Water scalar Visual* Visual* Visual* NORML NORML NEG Meg MSTM D5185(m) S25 4 Barium ppm ASTM D5185(m) 328 83 Manganese ppm ASTM D5185(m) 1 0 Manganese ppm ASTM D5185(m) Manganese ppm ASTM D5185(m) 1 8 Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518		Silt	scalar	Visual*	NONE	NONE		
Appearance Scalar Visual* NORML NORM		Debris	scalar	Visual*	NONE	NONE		
Odor scalar Visual* NORML NORML FEMULIFIED CONDITION		Sand/Dirt	scalar	Visual*	NONE	NONE		
Emulsified Water scalar Visual* >0.1 NEG		Appearance	scalar	Visual*	NORML	NORML		
Sodium ppm ASTM D5185(m) >25 4		Odor	scalar	Visual*	NORML	NORML		
Boron ppm ASTM D5185(m) 328 83		Emulsified Water	scalar	Visual*	>0.1	NEG		
Barium ppm ASTM D5185(m) 1 0 Molybdenum ppm ASTM D5185(m) 41 Manganese ppm ASTM D5185(m) 41 Magnesium ppm ASTM D5185(m) 7 69 Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518	FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	>25	4		
Barium ppm ASTM D5185(m) 1 0 Molybdenum ppm ASTM D5185(m) <1	The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	328	83		
Manganese ppm ASTM D5185(m) <1		Barium	ppm	ASTM D5185(m)	1	0		
Magnesium ppm ASTM D5185(m) 1 8 Calcium ppm ASTM D5185(m) 7 69 Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518		Molybdenum	ppm	ASTM D5185(m)		<1		
Calcium ppm ASTM D5185(m) 7 69 Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518		Manganese	ppm	ASTM D5185(m)		<1		
Phosphorus ppm ASTM D5185(m) 1145 1056 Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518		Magnesium	ppm	ASTM D5185(m)	1	8		
Zinc ppm ASTM D5185(m) 3 87 Sulfur ppm ASTM D5185(m) 17909 18518		Calcium	ppm	ASTM D5185(m)	7	69		
Sulfur ppm ASTM D5185(m) 17909 18518		Phosphorus	ppm	ASTM D5185(m)	1145			
			ppm	ASTM D5185(m)	3	87		
Visc @ 40°C cSt ASTM D7279(m) 99.6 101								
		Visc @ 40°C	cSt	ASTM D7279(m)	99.6	101		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: LH0284786 Lab Number : 02620015 Unique Number : 5737125 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received **Tested**

Diagnosed

: 05 Mar 2024 : 05 Mar 2024 - Wes Davis

: 05 Mar 2024

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.

American Iron and Metal

131 Toombs St Moncton, NB CA E1A 3A5

Contact: Service Manager

T: F: