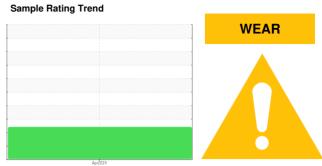


OIL ANALYSIS REPORT

Fenner Dunlop - F00100 A2404033

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)



DIAGNOSIS

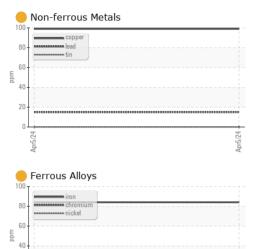
Wear

Copper and iron ppm levels are noted.

Batch # Client Info 2024 03 0730					Apr2024		
Department Client Info Production	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample From Client Info Initial	Batch #		Client Info		2024 03 0730		
Production Stage Client Info Initial Sent to WC Client Info O4/05/2024 Sample Number Client Info O5 Apr 2024	Department		Client Info		Production		
Production Stage Client Info Initial Sent to WC Client Info O4/05/2024 Sample Number Client Info O5 Apr 2024	•		Client Info		Machine		
Sample Number Client Info E30001806 Client Info O5 Apr 2024 Client Info O5 Apr 2024 Client Info O6 Client Info O7 Client Info O8 Client Info Client Info O8 Client Info Client			Client Info		Initial		
Sample Date Client Info O5 Apr 2024	Sent to WC		Client Info		04/05/2024		
Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info N/A Sample Status ABNORMAL CONTAMINATION method limit/base current history1 histo WEAR METALS method limit/base current history1 histo Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 1 Chromium ppm ASTM D5185(m) >10 1 Silver ppm ASTM D5185(m) >0 Silver ppm ASTM D5185(m) >20 99 Aluminum ppm ASTM D5185(m) >20 99 Copper ppm ASTM D5	Sample Number		Client Info		E30001806		
Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info N/A Sample Status ABNORMAL CONTAMINATION method limit/base current history1 histo WEAR METALS method limit/base current history1 histo Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 1 Nickel ppm ASTM D5185(m) >10 1 Silver ppm ASTM D5185(m) >0 Aluminum ppm ASTM D5185(m) >20 99 Copper ppm ASTM D5185(m) >20 99 Tin ppm	Sample Date		Client Info		05 Apr 2024		
Oil Changed Client Info N/A Sample Status ABNORMAL CONTAMINATION method limit/base current history1 history1 Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 <1 Chromium ppm ASTM D5185(m) >10 1 Nickel ppm ASTM D5185(m) >10 1 Silver ppm ASTM D5185(m) >10 2 Aluminum ppm ASTM D5185(m) >20 15 Lead ppm ASTM D5185(m) >20 99 Copper <td></td> <td>hrs</td> <td>Client Info</td> <td></td> <td>-</td> <td></td> <td></td>		hrs	Client Info		-		
CONTAMINATION method limit/base current history1 history2 history3 history4 history5 history5 history6 history6 history6 history7 history7 history7 history8 method limit/base current history1 history8 history8 history9 history8 history9 histor	Oil Age	hrs	Client Info		0		
CONTAMINATION method limit/base current history1 history1 Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 -1 Nickel ppm ASTM D5185(m) >10 1 Nickel ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) >10 2 Aluminum ppm ASTM D5185(m) >20 15 Lead ppm ASTM D5185(m) >20 99 Copper ppm ASTM D5185(m) >10 0 Tin ppm ASTM D5185(m) 0	-		Client Info		N/A		
Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 <1	•				ABNORMAL		
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 84 Chromium ppm ASTM D5185(m) >10 <1	CONTAMINATION	1	method	limit/base	current	history1	history2
Iron	Nater		WC Method	>0.05	NEG		
Chromium ppm ASTM D5185(m) >10 <1 Nickel ppm ASTM D5185(m) >10 1 Titanium ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) 0 Aluminum ppm ASTM D5185(m) >10 2 Lead ppm ASTM D5185(m) >20 99 Copper ppm ASTM D5185(m) >10 0 Tin ppm ASTM D5185(m) >10 0 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 5 2	WEAR METALS		method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185(m)	>20	84		
Titanium ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) 0 Aluminum ppm ASTM D5185(m) >10 2 Lead ppm ASTM D5185(m) >20 99 Copper ppm ASTM D5185(m) >10 0 Tin ppm ASTM D5185(m) 0 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histo Boron ppm ASTM D5185(m) 5 2 Molybdenum ppm	Chromium	ppm	ASTM D5185(m)	>10	<1		
Silver	Nickel	ppm	ASTM D5185(m)	>10	1		
ASTM D5185(m) >10 2	Γitanium	ppm	ASTM D5185(m)		0		
Lead	Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM D5185(m) >20 99 Tin ppm ASTM D5185(m) >10 0 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histo Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1	Aluminum	ppm	ASTM D5185(m)	>10	2		
Tin ppm ASTM D5185(m) >10 0 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histo Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 0	_ead	ppm	ASTM D5185(m)	>20	15		
Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histo Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1	Copper	ppm	ASTM D5185(m)	>20	99		
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 0	Γin	ppm	ASTM D5185(m)	>10	0		
Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 0	Antimony	ppm	ASTM D5185(m)		0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1	√anadium	ppm	ASTM D5185(m)		0		
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1	3eryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 5 2 Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 0	Cadmium	ppm	ASTM D5185(m)		0		
Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 5 0	Boron	ppm	ASTM D5185(m)	5	2		
	3arium	ppm	ASTM D5185(m)	5	<1		
Manganese npm 45TM D5185/m) -1	Volybdenum	ppm	ASTM D5185(m)	5	0		
Wanganese ppm Admibilionini	Manganese	ppm	ASTM D5185(m)		<1		
Magnesium ppm ASTM D5185(m) 25 25	Magnesium	ppm	ASTM D5185(m)	25	25		
Calcium ppm ASTM D5185(m) 200 87	Calcium	ppm	ASTM D5185(m)	200	87		
Phosphorus ppm ASTM D5185(m) 300 718	Phosphorus	ppm	ASTM D5185(m)	300	718		
Zinc ppm ASTM D5185(m) 370 547	Zinc	ppm	ASTM D5185(m)	370	547		
Sulfur ppm ASTM D5185(m) 2500 2737	Sulfur	ppm	ASTM D5185(m)	2500	2737		
Lithium ppm ASTM D5185(m) <1	_ithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS method limit/base current history1 history	CONTAMINANTS		method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m) >15 14	Silicon	ppm	ASTM D5185(m)	>15	14		
Sodium ppm ASTM D5185(m) 1					4		
Potassium ppm ASTM D5185(m) >20 1	Sodium	ppm	ASTM D5185(m)				



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	▲ WGOIL		
Odor	scalar	Visual*	NORML	NORML		
SAMPLE IMAGES	3	method	limit/base	current	history1	history2
SAMPLE IMAGES Color	6	method	limit/base	current	no image	no image
		method	limit/base	current		,



CALA ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No. : E30001806 Lab Number : 02627764 Unique Number : 5760896

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

Test Package : TEST (Additional Tests: ICP)

Validity of results and interpretation are based on the sample and information as supplied.

Received Tested Diagnosed

: 09 Apr 2024 : 10 Apr 2024

: 11 Apr 2024 - Tatiana Sorkina

To discuss this sample report, contact Customer Service at 1-905-372-2251.

CA K9A 5H5 Contact: Tatiana Sorkina tsorkina@e360s.ca T: (800)263-3939

640 Victoria Street

Cobourg, ON

Environmental 360 Solutions Ltd.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (905)373-4950

Report Id: CHECOB [WCAMIS] 02627764 (Generated: 04/11/2024 12:58:30) Rev: 1

Contact/Location: Tatiana Sorkina - CHECOB