WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

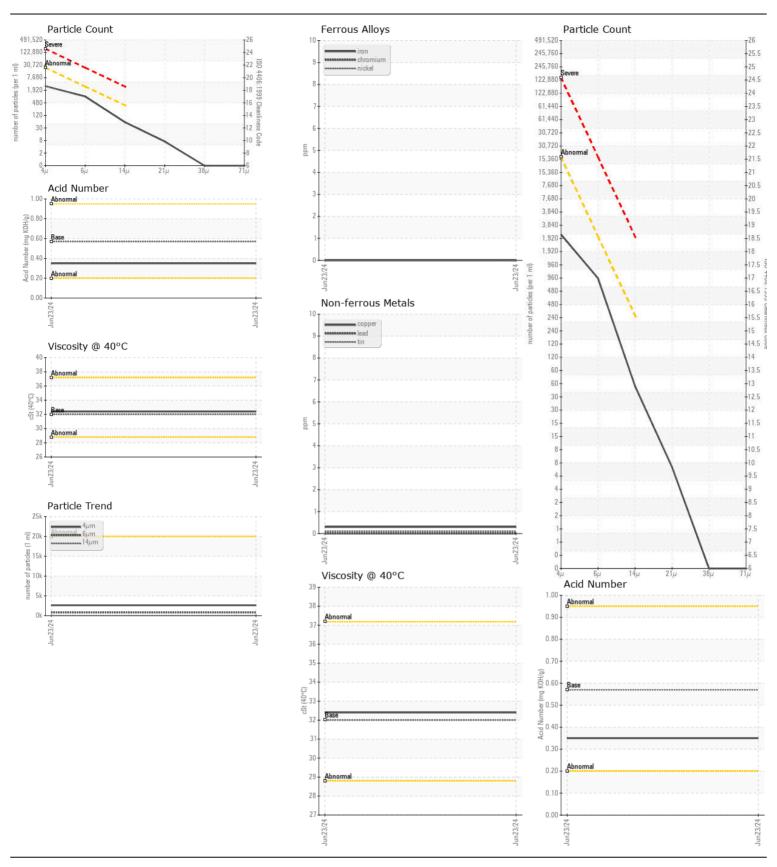
Machine Id

CINCI PRESS 5

Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- GAL)

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC)	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
American American	specified, however, a fluid match indicates that this fluid is (GENERIC)	Sample Number		Client Info		PTK0005823		
Mail HYDRAULIC OIL ISO 32. Please confirm.		Sample Date		Client Info		23 Jun 2024		
Oil Age hrs Citent Info 0		Machine Age	hrs	Client Info		0		
Cil Changed Filter	AW 111 DRAOLIC OIL 130 32. Flease collillill.	Oil Age	hrs	Client Info		0		
Filter Changed Sample Status		Filter Age	hrs	Client Info		0		
NORMAL		Oil Changed		Client Info		N/A		
Iron		Filter Changed		Client Info		N/A		
All component wear rates are normal. Chromium ppm ASTM D5185m 10 0		Sample Status				NORMAL		
All component wear rates are normal. Chromium ppm ASTM 0588m >10 0								
Nickel ppm ASTM D5185m 10 0	WEAR	Iron	ppm	ASTM D5185m	>20	0		
Titanium ppm ASTM/DSISSm < 1	All	Chromium	ppm	ASTM D5185m	>10	0		
Silver ppm ASTM D5185m >10 0	All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>10	0		
Aluminum ppm ASTM D5185m >10 0		Titanium	ppm	ASTM D5185m		<1		
Lead		Silver	ppm	ASTM D5185m		0		
Copper		Aluminum	ppm	ASTM D5185m	>10	0		
Tin		Lead	ppm	ASTM D5185m	>10	0		
Vanadium Vanadium		Copper	ppm	ASTM D5185m	>75	<1		
White Metal Yellow Metal Yollow Metal NONE NONE NONE NONE NONE NONE NONE NON		Tin	ppm	ASTM D5185m	>10	<1		
Vellow Metal Scalar Visual NONE NO		Vanadium	ppm	ASTM D5185m		0		
Vellow Metal Scalar Visual NONE NO		White Metal	scalar	*Visual	NONE	NONE		
Potassium		Yellow Metal	scalar		NONE	NONE		
Potassium								
Water WC Method So.1 NEG So.2631	CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	1		
Cleanliness code. The system and fluid cleanliness is acceptable. Particles >4µm	-	Potassium	ppm	ASTM D5185m	>20	2		
Particles >6 m	, , , ,	Water		WC Method	>0.1	NEG		
Particles >14µm	cleanliness code. The system and fluid cleanliness is acceptable.	Particles >4µm		ASTM D7647	>20000	2631		
Particles > 21 \(\text{pm} \) ASTM D7647 > 80 6 Particles > 38 \(\text{pm} \) ASTM D7647 > 20 0 Particles > 38 \(\text{pm} \) ASTM D7647 > 4 0 0 Oil Cleanliness ISO 4406 (c) \$\(21\)\subset{15}\) 19/17/13 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORM		Particles >6µm		ASTM D7647	>2500	838		
Particles >38µm ASTM D7647 >20 0 Particles >71µm ASTM D7647 >4 0 0 Oil Cleanliness ISO 4406 (c) \$21/18/15 19/17/13 Silt Scalar *Visual NONE NONE NONE Debris Scalar *Visual NONE NONE NONE NONE Sand/Dirt Scalar *Visual NONE NONE NONE NONE Appearance Scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NOR		Particles >14μm		ASTM D7647	>320	50		
Particles > 71 \mum ASTM D7647 >4 0 Oil Cleanliness ISO 4406 (c) >21/18/15 19/17/13 Silt Scalar *Visual NONE NONE Debris Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NONE NONE Appearance Scalar *Visual NORML		Particles >21µm		ASTM D7647	>80	6		
Oil Cleanliness ISO 4406 (c) >21/18/15 19/17/13		Particles >38µm		ASTM D7647	>20	0		
Silt scalar *Visual NONE NONE NONE Scalar *Visual NONE NONE NONE Scalar *Visual NORML NORML		Particles >71µm		ASTM D7647	>4	0		
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NORML NOR		Oil Cleanliness		ISO 4406 (c)	>21/18/15	19/17/13		
Sand/Dirt Scalar *Visual NONE NONE Appearance Scalar *Visual NORML		Silt	scalar	*Visual	NONE	NONE		
Appearance		Debris	scalar	*Visual	NONE	NONE		
Codor Scalar Visual NORML NO		Sand/Dirt	scalar	*Visual	NONE	NONE		
Codor Scalar Visual NORML NO		Appearance	scalar	*Visual	NORML	NORML		
Sodium ppm ASTM D5185m 5 0		Odor	scalar	*Visual	NORML	NORML		
Boron ppm ASTM D5185m 5 0 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		Emulsified Water	scalar	*Visual	>0.1	NEG		
Boron ppm ASTM D5185m 5 0								
Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 5 0 Magnesium ppm ASTM D5185m 25 0 Magnesium ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35	FLUID CONDITION		ppm					
Molybdenum ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 25 0 Magnesium ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35	The AN level is acceptable for this fluid. The condition of the cill is		ppm			0		
Molybdenum ppm ASTM D5185m 5 0 Manganese ppm ASTM D5185m 25 0 Magnesium ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35	·	Barium	ppm	ASTM D5185m	5	0		
Magnesium ppm ASTM D5185m 25 0 Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35	suitable for further service.	Molybdenum		ASTM D5185m	5	0		
Calcium ppm ASTM D5185m 200 50 Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		Manganese	ppm	ASTM D5185m		<1		
Phosphorus ppm ASTM D5185m 300 372 Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		•	ppm					
Zinc ppm ASTM D5185m 370 462 Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		Calcium	ppm	ASTM D5185m	200	50		
Sulfur ppm ASTM D5185m 2500 1011 Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		Phosphorus	ppm	ASTM D5185m	300	372		
Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.35		Zinc	ppm	ASTM D5185m	370	462		
		Sulfur	ppm	ASTM D5185m	2500	1011		
Visc @ 40°C		Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.35		
		Visc @ 40°C	cSt	ASTM D445	32	32.4		





Certificate L2367

Laboratory Sample No.

Lab Number : 06218143 Unique Number : 11096340

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PTK0005823 Test Package : MOB 2

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received : 24 Jun 2024 **Tested** : 25 Jun 2024

: 25 Jun 2024 - Wes Davis Diagnosed

MARKSMAN METALS CO INC 12260 42ND ST NE ST MICHAEL, MN US 55376

Contact: VIRGIL OLSON volson@marksmanmetals.com T: (763)497-4640

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)