

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id **CFS BRANDS P-76** Component Hydraulic System Fluid

AW HYDRAULIC OIL ISO 46 (--- GAL)

### DIAGNOSIS

#### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### Wear

All component wear rates are normal.

#### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

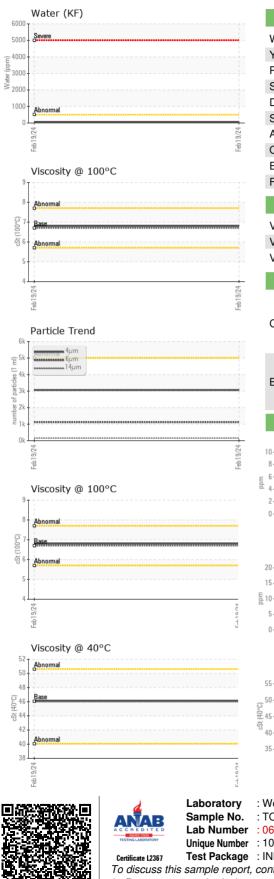
#### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

				Feb2024		
SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		TO2000300		
Sample Date		Client Info		19 Feb 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<1		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>20	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>20	0		
Copper	ppm	ASTM D5185m	>20	19		
Tin	ppm	ASTM D5185m	>20	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0		
Barium	ppm	ASTM D5185m	5	8		
Molybdenum	ppm	ASTM D5185m	5	0		
Manganese	ppm	ASTM D5185m		0		
Magnesium	ppm	ASTM D5185m	25	29		
Calcium	ppm	ASTM D5185m	200	24		
Phosphorus	ppm	ASTM D5185m	300	319		
Zinc	ppm	ASTM D5185m	370	327		
Sulfur	ppm	ASTM D5185m	2500	1535		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon		ASTM D5185m	>15	0		
Sodium	ppm	ASTM D5185m	>15	0		
Potassium	ppm	ASTM D5185m	>20	1		
Water	ppm %	ASTM D5185III	>0.05	0.004		
ppm Water	ppm	ASTM D0304 ASTM D6304	>500	41		
FLUID CLEANLIN		method	limit/base	current	history1	history2
Particles >4µm	200	ASTM D7647	>5000	3062		
Particles >6µm		ASTM D7647 ASTM D7647	>1300	1123		
Particles >14µm		ASTM D7647	>160	158		
Particles >21µm		ASTM D7647		53		
Particles >38µm		ASTM D7647	>10	4		
Particles >71µm		ASTM D7647		0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	0 19/17/14		
		( )				
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.35		



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Yellow Metal s Precipitate s Silt s Debris s Sand/Dirt s Appearance s Odor s Emulsified Water s Free Water s FLUID PROPERTIE Visc @ 40°C c	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual <b>t</b> *Visual <b>b</b> ASTM D445 ASTM D445	NONE NONE NONE NONE NORE NORML NORML >0.05 Imit/base 46 6.7	NONE NONE NONE NONE NORML NORML NEG NEG Current	      history1	        history2
Precipitate s Silt s Debris s Sand/Dirt s Appearance s Ddor s Emulsified Water s Free Water s FLUID PROPERTIE /isc @ 40°C d /isc @ 100°C d /iscosity Index (VI) s	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual <b>method</b> ASTM D445	NONE NONE NONE NORML NORML >0.05 Iimit/base	NONE NONE NONE NORML NORML NEG NEG	     history1	
Silt 5 Debris 5 Sand/Dirt 5 Appearance 5 Ddor 5 Emulsified Water 5 Free Water 5 FLUID PROPERTIE Visc @ 40°C 6 Visc @ 100°C 6 Viscosity Index (VI) 5 SAMPLE IMAGES	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual <b>method</b> ASTM D445	NONE NONE NORML NORML >0.05 limit/base 46	NONE NONE NORML NORML NEG NEG	     history1	    
Debris s   Sand/Dirt s   Appearance s   Ddor s   Emulsified Water s   Free Water s   FLUID PROPERTIE s   Visc @ 40°C s   Visc @ 100°C s   Viscosity Index (VI) s   SAMPLE IMAGES s	scalar scalar scalar scalar scalar scalar scalar scalar scalar cSt	*Visual *Visual *Visual *Visual *Visual <b>b</b> method ASTM D445	NONE NORML NORML >0.05 limit/base 46	NONE NORML NORML NEG NEG Current	    history1	   
Sand/Dirt s Appearance s Odor s Emulsified Water s Free Water s FLUID PROPERTIE /isc @ 40°C d /isc @ 100°C d /iscosity Index (VI) s SAMPLE IMAGES	scalar scalar scalar scalar scalar scalar <b>ES</b> cSt	*Visual *Visual *Visual *Visual *Visual <b>method</b> ASTM D445	NONE NORML NORML >0.05 limit/base	NONE NORML NORML NEG NEG current	   history1	  
Appearance a   Ddor a   Emulsified Water a   Free Water a   FLUID PROPERTIE a   /isc @ 40°C a   /isc @ 100°C a   /iscosity Index (VI) a   SAMPLE IMAGES a	scalar scalar scalar scalar scalar S S cSt cSt	*Visual *Visual *Visual *Visual <b>method</b> ASTM D445 ASTM D445	NORML NORML >0.05 limit/base	NORML NORML NEG NEG current	   history1	
Dodor \$   Emulsified Water \$   Free Water \$   FLUID PROPERTIE   /isc @ 40°C \$   /isc @ 100°C \$   /iscosity Index (VI) \$   SAMPLE IMAGES	scalar scalar scalar scalar ES cSt cSt	*Visual *Visual *Visual <b>method</b> ASTM D445 ASTM D445	NORML >0.05 limit/base 46	NORML NEG NEG current	  history1	
Emulsified Water s   Free Water s   FLUID PROPERTIE   Visc @ 40°C s   Visc @ 100°C s   Viscosity Index (VI) s   SAMPLE IMAGES	scalar scalar ES cSt cSt	*Visual *Visual method ASTM D445 ASTM D445	>0.05 limit/base 46	NEG NEG current	  history1	
Free Water s FLUID PROPERTIE Visc @ 40°C c Visc @ 100°C c Viscosity Index (VI) s SAMPLE IMAGES	scalar ES cSt cSt	*Visual method ASTM D445 ASTM D445	limit/base 46	NEG current	 history1	
FLUID PROPERTIE   Visc @ 40°C 0   Visc @ 100°C 0   Viscosity Index (VI) 0   SAMPLE IMAGES	ES cSt cSt	method ASTM D445 ASTM D445	46	current	history1	
Visc @ 40°C d Visc @ 100°C d Viscosity Index (VI) S SAMPLE IMAGES	cSt cSt	ASTM D445 ASTM D445	46			history2
Visc @ 40°C ( Visc @ 100°C ( Viscosity Index (VI) S SAMPLE IMAGES	cSt cSt	ASTM D445 ASTM D445	46			matoryz
Visc @ 100°C (Viscosity Index (VI) SAMPLE IMAGES	cSt	ASTM D445		40.1		
Viscosity Index (VI)			6.7	~ ~		
SAMPLE IMAGES	Scale	ASTM D2270		6.8		
			97	101		
Color		method	limit/base	current	history1	history2
					no image	no image
Bottom				(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	no image	no image
GRAPHS						
Ferrous Alloys			491,520	Particle Count		т26
iron			122,880			-24
			122,000	Severe		+24
			30,720			-22
4			₹ ≘ 7,680	Abnormal		-20
Feb 19/24			Feb 19/24 (per 1 m			-18
			Fel Des (b			10
Non-ferrous Metals			otted 480			-16
copper			Feb19/24- 1702 Feb19/24- 1702 Feb19/24- 1702 Feb19/24- 1702 Feb19/24- 1702 Feb19/24-	)-		+20 +18 +16 +14
tin			30			-12
tin						
			5	3+		10
19/24			9/24	2-		
Feb1			Feb19/24	1		
Viscosity @ 40°C				Acid Number	14μ 21μ	38µ 71µ
			₽1.00			
Abnormal			<u>.</u> <u>.</u> <u>.</u> <u>.</u> <u>.</u> 80	)		
Base			Ē 0.60	Base		
Abnormal			- e 0.40	Abnormal		
			≥ 0.20	۲		
			- 9/24 -	9/24		
Feb 1			Feb1	Feb 1		
5	Madisor Recei Teste	ved : 26	, NC 27513 5 Feb 2024 7 Feb 2024	Feb19/24		DMA CITY DIVIS NICKLAS A OMA CITY,

\* - 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)

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