

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Area [41120232] DVT 5 Component Refrigeration Compressor Fluid {not provided} (---- GAL)

# DIAGNOSIS

## Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the brand and viscosity of the oil on your next sample. We were unable to perform a particle count due to a high concentration of particles present in this sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of visible silt present in the sample.

## Fluid Condition

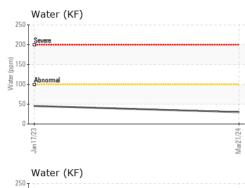
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

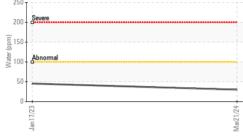
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP242710	USP245892	
Sample Date		Client Info		21 Mar 2024	17 Jan 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	7	<1	
Chromium	ppm	ASTM D5185m	>2	<1	0	
Nickel	ppm	ASTM D5185m		<1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>3	0	0	
Lead		ASTM D5185m	>2	۰ <1	0	
	ppm			2		
Copper Tin	ppm	ASTM D5185m ASTM D5185m	>8 >4		2	
	ppm		>4	1	0	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	
Barium	ppm	ASTM D5185m		0	1	
Molybdenum	ppm	ASTM D5185m		<1	0	
Manganese	ppm	ASTM D5185m		<1	0	
Magnesium	ppm	ASTM D5185m		<1	<1	
Calcium	ppm	ASTM D5185m		4	0	
Phosphorus	ppm	ASTM D5185m		116	93	
Zinc	ppm	ASTM D5185m		6	3	
Sulfur	ppm	ASTM D5185m		300	66	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1	0	
Sodium	ppm	ASTM D5185m		10	0	
Potassium	ppm	ASTM D5185m	>20	3	<1	
Water	%	ASTM D6304	>0.01	0.003	0.004	
ppm Water	ppm	ASTM D6304	>100	30	45.5	
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000		1972	
Particles >6µm		ASTM D7647	>2500		261	
Particles >14µm		ASTM D7647	>320		13	
Particles >21µm		ASTM D7647	>80		3	
Particles >38µm		ASTM D7647	>20		0	
Particles >71µm		ASTM D7647			0	
Oil Cleanliness		ISO 4406 (c)	>20/18/15		18/15/11	
FLUID DEGRADA		method	limit/base	current	history1	history2
			minudase			
Acid Number (AN)	mg KOH/g	ASTM D974		0.48	0.35	

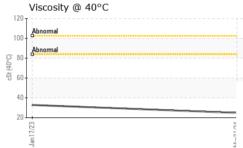
Contact/Location: Service Manager - HILDAL Page 1 of 2



# **OIL ANALYSIS REPORT**







Visc @ 40°C cSt ASTM D445 24.8 32.8 SAMPLE IMAGES method Imit/base current history1 histor Color no image Bottom Ferrous Alloys 		VISUAL		method	limit/base	current	history1	history2
Yellow Matal  scalar  Nisual  NONE  NONE  NONE  NONE		White Metal	scalar *	*Visual	NONE	NONE	NONE	
Sitt  scalar  Visual  NONE  NONE  NONE  LIGHT		Yellow Metal	scalar *	*Visual	NONE	NONE	NONE	
Laboratory WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Sample No. Laboratory WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Sample No. Samp		Precipitate	scalar *	*Visual	NONE	NONE	NONE	
Sand/Dirt scalar Visual NONE NONE NONE Appearance scalar Visual NORML NORML NORML NORML NORML NORML Sector Visual NORML NORML NORML NORML Sector Visual NORML NORML NORML NORML NORML Sector Visual NORML NORML NORML NORML Sector Visual NORML NORML NORML Sector Visual NORML NORML NORML NORML Sector Visual NORML NORML NORML Sector Visual NORML		Silt	scalar *	*Visual	NONE	<b>MODER</b>	NONE	
Appearance scalar 'Visual NORML NORML NORML NORML NORML Odor scalar 'Visual NORML NORML NORML NORML NORML Free Water scalar 'Visual NORML NORML NORML NORML Free Water scalar 'Visual NORML NORML NORML NORML Free Water scalar 'Visual NORML NORML NORML Free Water scalar 'Visual NORML NORML NORML Free Water scalar 'Visual NORML NORML Free Water scalar 'Visual NORML SAMPLE IMAGES method limitbase current history1 histor SAMPLE IMAGES method limitbase current nor image GRAPHS Ferous Alloys 		Debris	scalar *	*Visual	NONE	NONE	LIGHT	
Emulsified Water scalar Visual >0.01 NEG NEG Free Water scalar Visual NO.1 NEG NEG FLUID PROPERTIES method imitbase current history1 histor Visc @ 40°C c.St ASTM D445 24.8 32.8 SAMPLE IMAGES method imitbase current history1 histor Color no imag Color no imag GRAPHS Ferrous Aloys 		Sand/Dirt	scalar *	*Visual	NONE	NONE	NONE	
Emulsified Water scalar Visual >0.01 NEG NEG Free Water scalar Visual >0.01 NEG NEG FLUID PROPERTIES method limitbase current history1 histor Visc @ 40°C c.St ASTM D445 24.8 32.8 SAMPLE IMAGES method limitbase current history1 histor Color no image Color no image GRAPHS Ferrous Aloys 	21/24	Appearance	scalar *	*Visual	NORML	NORML	NORML	
Free Water  scalar  Visual  NEG  NEG	War	Odor	scalar *	*Visual	NORML	NORML	NORML	
FLUID PROPERTIES  method  limit/base  current  history1		Emulsified Water	scalar *	*Visual	>0.01	NEG	NEG	
Visc @ 40°C  cst  ASTM D445  24.8  32.8     SAMPLE IMAGES  method  innit/base  current  history1  history1    Color  Innit/base  current  history1  no image    Bottom  Innit/base  current  history1  no image    GRAPHS  Innit/base  Innit/base  no image    GraphS  Ferrous Alloys  Innit/base  Innit/base  no image    Viscosity @ 40°C  Innit/base  Innit/base  Innit/base  Innit/base    Viscosity @ 40°C  Innit/base  Innit/base  Innit/base  Innit/base    Viscosity @ 40°C  Innit/base  Innit/base  Innit/base  Innit/base    Iboratory  WearCheck USA - 501 Madison Ave, Cary, NC 27513  HILMAR CHE    Sample No.  USP242710  Received  101 Apr 2024  DALHART    Lab Number  109561563  Tested  103 Apr 2024  DALHART    Unique Number  109561563  Diagnosed  103 Apr 2024  DALHART		Free Water	scalar *	*Visual		NEG	NEG	
SAMPLE IMAGES method limit/base current history1 history Color no image Bottom Color no image GRAPHS Ferrous Alloys Ferrous Alloys Mon-ferrous Metals Viscosity @ 40°C Uscosity @ 40°C U		FLUID PROPERT	IES	method	limit/base	current	history1	history2
Color no image Color no image		Visc @ 40°C	cSt /	ASTM D445		24.8	32.8	
Bottom GRAPHS Ferrous Alloys 0 0 0 0 0 0 0 0 0 0 0 0 0		SAMPLE IMAGES	6	method	limit/base	current	history1	history2
GRAPHS Ferrous Alloys	Mar21/24	Color						no image
Ferrous Alloys Ferrous Alloys Non-ferrous Metals Non-ferrous Metals Viscosity @ 40°C Viscosity @ 40°C Viscosity @ 40°C Uscosity @ 40°C		Bottom						no image
Image: Sample No.  WearCheck USA - 501 Madison Ave., Cary, NC 27513  HLMAR CHE    Sample No.  :: USP242710  Received  :: 01 Apr 2024    Laboratory  :: 00155158  Diagnosed  :: 03 Apr 2024  DaLHART    Test Package  :: ND 2  :: 01 Apr 2024  DaLHART								
Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: USP242710 Lab Number : 0055158 USP242710 Lab Number : 10955158 Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: USP242710 Extend :: 03 Apr 2024 DaLHART Test Package :: IND 2 Magina Sample No. :: Cortact: Service Man	11-	2			Mar21/24			
Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: USP242710 Lab Number :: 0055158 Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: USP242710 Lab Number :: 005135693 Lab Number :: 005135693 Laboratory :: 0055158 Laboratory			s					
Laboratory  WearCheck USA - 501 Madison Ave., Cary, NC 27513  HILMAR CHE    Sample No.  USP242710  Received  :01 Apr 2024    Lab Number  :06135693  Tested  :03 Apr 2024  DaLHART    Unque Number  :10955158  Diagnosed  :03 Apr 2024  DaLHART    Test Package  :ND 2  :ND 2  :ND 2  :ND 2		8 - copper						
Viscosity @ 40°C  Acid Number    000000000000000000000000000000000000								
Viscosity @ 40°C  Acid Number    000000000000000000000000000000000000		2						
Viscosity @ 40°C  Acid Number    Image: state 12367  WearCheck USA - 501 Madison Ave., Cary, NC 27513  Acid Number    Image: state 12367  WearCheck USA - 501 Madison Ave., Cary, NC 27513  HILMAR CHE    Image: state 12367  USP242710  Received in 01 Apr 2024  Dalagnosed in 03 Apr 2024 - Doug Bogart    Image: state 12367  Test Package in IND 2  Image: state 12367  Contact: Service Man		0			54			
Viscosity @ 40°C  Acid Number    Image: state 12367  WearCheck USA - 501 Madison Ave., Cary, NC 27513  Acid Number    Image: state 12367  WearCheck USA - 501 Madison Ave., Cary, NC 27513  HILMAR CHE    Image: state 12367  USP242710  Received in 01 Apr 2024  Dalagnosed in 03 Apr 2024 - Doug Bogart    Image: state 12367  Test Package in IND 2  Image: state 12367  Contact: Service Man		an 17//			lar21//			
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Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : USP242710 Lab Number : 06135693 Unique Number : 10955158 Diagnosed : 03 Apr 2024 - Doug Bogart Test Package : IND 2 Contact: Service Man		100			(B/HO	40		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : USP242710 Lab Number : 06135693 Unique Number : 10955158 Diagnosed : 03 Apr 2024 - Doug Bogart Test Package : IND 2 Contact: Service Man		abnormal 80			Ĕ 0.3	30		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : USP242710 Lab Number : 06135693 Unique Number : 10955158 Diagnosed : 03 Apr 2024 - Doug Bogart Test Package : IND 2 Contact: Service Man		중 60			.0.2	20-		
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Unique Number    : 10955158    Diagnosed    : 03 Apr 2024 - Doug Bogart      Inte 12367    Test Package    : IND 2    Contact: Service Man								DALHART, T
cuss this sample report, contact Customer Service at 1-800-237-1369.	Unique Number tte L2367 Test Package	: 10955158 : IND 2	Diagno	<b>sed</b> : 03	Apr 2024 - Do	oug Bogart	Contact: Se	US
protes test methods that are outside of the ISO 17025 scope of accreditation.								т

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: Service Manager - HILDAL Page 2 of 2

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