

OIL ANALYSIS REPORT

Sample Rating Trend

DIRT

Area HOWARD SHEPPARD 2571 HOWARD SHEPPARD

Front Differential Fluid GEAR OIL SAE 75W90 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor.

🛑 Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The AN level is acceptable for this fluid.

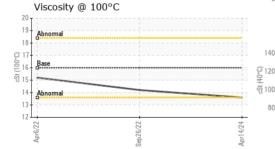
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0934653	WC0771224	WC0692959
Sample Date		Client Info		14 Apr 2024	26 Sep 2022	06 Apr 2022
Machine Age	mls	Client Info		122405	25046	553
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	267	132	58
Chromium	ppm	ASTM D5185m	>10	1	<1	2
Nickel	ppm	ASTM D5185m	>10	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	2
Aluminum	ppm	ASTM D5185m	>25	1 6	4	<1
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m		2	2	<1
Tin	ppm		>100	0	<1	<1
Vanadium		ASTM D5185m	~10	ں <1	0	0
Cadmium	ppm ppm	ASTM D5185m		0	0	<1
ADDITIVES	pp	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	199	256	270
Barium	ppm	ASTM D5185m	200	3	2	0
Molybdenum		ASTM D5185m	12	0	<1	<1
-	ppm	ASTM D5185m	12	11	9	9
Manganese Magnesium	ppm	ASTM D5185m	12	<1	1	<1
e e e e e e e e e e e e e e e e e e e	ppm			7		4
Calcium	ppm	ASTM D5185m	150	-	6	
Phosphorus	ppm	ASTM D5185m	1650	1356	1331	1465
Zinc	ppm	ASTM D5185m	125	18	12	5
Sulfur	ppm	ASTM D5185m	22500	26463	26854	21855
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	<mark>/</mark> 78	21	10
Sodium	ppm	ASTM D5185m		6	6	5
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Water	%	ASTM D6304	>.2	0.062	0.054	0.052
ppm Water	ppm	ASTM D6304	>2000	621	540.0	526.4
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	A 253230		
Particles >6µm		ASTM D7647	>5000	<u> </u>		
Particles >14µm		ASTM D7647	>640	159		
Particles >21µm		ASTM D7647	>160	11		
Particles >38µm		ASTM D7647	>40	1		
Particles >71µm		ASTM D7647	>10	0		
r artioloo > / ipin		100 4406 (a)	>21/19/16	4 25/23/14		
Oil Cleanliness		ISO 4406 (c)	>21/19/10	ZJ/ZJ/14		
		method	limit/base	current	history1	history2

Contact/Location: MIKE BARRY - BASTARHD Page 1 of 2



OIL ANALYSIS REPORT

Particle Trend		VIS	UA
0k - 4μm		White	e M
Dk -		Yellov	w N
Dk		Preci	pita
Dk		Silt	
20k - 14μm 20k - 14μm 20k - 14μm 20k - 14μm		Debri	s
		Sand	/Dii
Apr6/22	Sep26/22 -	Abbe Odor	ara
Apr	Sep2	Odor	
Ciliara (nama)		Emul	sifie
Silicon (ppm)		Free	Wa
00 Severe			
		FLU	
50 -		Visc (@ 4
Abnormal		Visc	@ '
50		Visco	sity
0			
	8/22 -		VIP
Apri6/22	Sep26/22 + -		
Apr6/22			
		Apr14/24	
Aluminum (ppn		Apr14/24	
Aluminum (ppn		5214 Ludy	
Aluminum (ppn		Apr14/24	
Aluminum (ppn		5214 Ludy	
Aluminum (ppn		5214 Ludy	
Aluminum (ppn		5214 Ludy	
Aluminum (ppn	n)	F2/t-puby Botto	m
Aluminum (ppn		PZ/FLIde Botto	m M
Aluminum (ppn	n)	F2/t-puby Botto	m
Aluminum (ppn	n)	bZlb Ludy bZlb Ludy bZlb Ludy GR.	m M
Aluminum (ppn	n)	EColor Botto	m M
Aluminum (ppn	n)	FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY	m
Aluminum (ppn	n)	Ecolor Botto	m
Aluminum (ppn	n)	FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY	m
Aluminum (ppn	n)	FZIFILIDY Color Botto FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY FZIFILIDY	m AP rou
Aluminum (ppn	n)	Ecolor Botto	m AP rou
Aluminum (ppn	n)	bZlb Judy Botto	m AP rou



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	🔺 MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	109	92.8	96.9	102
Visc @ 100°C	cSt	ASTM D445	16.0	13.6	14.2	15.2
Viscosity Index (VI)	Scale	ASTM D2270	157	148	150	156
SAMPLE IMAGES	5	method	limit/base	current	history1	history2



Alloys Particle Count 491.52 122.88 30.72 7 68 Apr14/24 Sep 26/22 (per 1 1,920 articles ous Metals 480 120 31 Apr6/22 ep26/22 nr14/74 64 144 214 384 Viscosity @ 40°C Acid Number (B/H0X BM) Abnormal 2. Abnorma Ahnorma Acid N 80 Apr14/24 -Sep26/22. Sep26/22 Unr6/22



: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Laboratory : WC0934653 Received : 30 May 2024 Sample No. Lab Number : 06195903 Tested : 02 Jun 2024 : 02 Jun 2024 - Doug Bogart Unique Number : 11058026 Diagnosed Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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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