

OIL ANALYSIS REPORT

Sample Rating Trend

w2020 Apr2021 Aug2021 Jan2022 May2022 Oct2022 May2023 Dec2





Component Rear Differential

Fluid

CHEVRON DELO SYNTHETIC GEAR 75W90 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

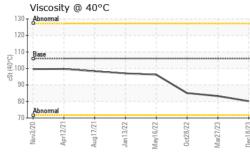
Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0102226	PCA0092573	PCA0079581
Sample Date		Client Info		18 Dec 2023	27 Mar 2023	28 Oct 2022
Machine Age	mls	Client Info		249638	201188	176121
Oil Age	mls	Client Info		249638	201188	176121
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	41	42	34
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	1
Aluminum	ppm	ASTM D5185m	>25	3	1	<1
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>100	<1	0	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		211	215	245
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		14	19	18
Manganese	ppm	ASTM D5185m		<1	3	3
Magnacium	ppm	ASTM D5185m		92	103	103
waynesium	1-1-					
Magnesium Calcium	ppm	ASTM D5185m		204	194	188
•		ASTM D5185m ASTM D5185m		204 1079	194 1283	188 1184
Calcium Phosphorus	ppm			-		
Calcium Phosphorus	ppm ppm	ASTM D5185m		1079	1283	1184
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base	1079 179	1283 168	1184 154
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	1079 179 19443	1283 168 24718	1184 154 23133
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method		1079 179 19443 current	1283 168 24718 history1	1184 154 23133 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>75	1079 179 19443 current 19	1283 168 24718 history1 9	1184 154 23133 history2 8
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75	1079 179 19443 current 19 0	1283 168 24718 history1 9 <1	1184 154 23133 history2 8 0
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	>75 >20 limit/base NONE	1079 179 19443 current 19 0 0 0 current NONE	1283 168 24718 history1 9 <1 0 history1 NONE	1184 154 23133 history2 8 0 0 0 history2 VLITE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	>75 >20 limit/base	1079 179 19443 current 19 0 0 0 current NONE NONE	1283 168 24718 history1 9 <1 0 history1	1184 154 23133 history2 8 0 0 0 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm TS ppm ppm ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	>75 >20 limit/base NONE	1079 179 19443 current 19 0 0 0 current NONE	1283 168 24718 history1 9 <1 0 history1 NONE	1184 154 23133 history2 8 0 0 0 history2 VLITE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm TS ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	>75 >20 limit/base NONE NONE	1079 179 19443 <u>current</u> 19 0 0 0 <u>current</u> NONE NONE NONE NONE	1283 168 24718 history1 9 <1 0 kistory1 NONE NONE	1184 154 23133 history2 8 0 0 0 history2 VLITE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE	1079 179 19443 <u>current</u> 19 0 0 0 <u>current</u> NONE NONE NONE	1283 168 24718 9 <1 0 history1 NONE NONE NONE NONE	1184 154 23133 history2 8 0 0 0 history2 VLITE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE	1079 179 19443 <u>current</u> 19 0 0 0 <u>current</u> NONE NONE NONE NONE	1283 168 24718 9 <1 0 history1 NONE NONE NONE NONE NONE	1184 154 23133 history2 8 0 0 history2 VLITE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE	1079 179 19443 current 19 0 0 0 current NONE NONE NONE NONE NONE NONE	1283 168 24718 9 <1 0 <u>history1</u> NONE NONE NONE NONE NONE NONE	1184 154 23133 history2 8 0 0 history2 VLITE NONE NONE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE	1079 179 19443 current 19 0 0 0 current NONE NONE NONE NONE NONE NONE NONE	1283 168 24718 history1 9 <1 0 history1 NONE NONE NONE NONE NONE NONE NONE	1184 154 23133 history2 8 0 0 0 history2 VLITE NONE NONE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NONE	1079 179 19443 <i>current</i> 19 0 0 <i>current</i> NONE NONE NONE NONE NONE NONE NONE NON	1283 168 24718 9 <1 0 +istory1 NONE NONE NONE NONE NONE NONE NONE NON	1184 154 23133 history2 8 0 0 0 history2 VLITE NONE NONE NONE NONE NONE NONE NONE NO
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>75)20 limit/base NONE NONE NONE NONE NONE NORML NORML	1079 179 19443 current 19 0 0 0 current NONE NONE NONE NONE NONE NONE NONE NON	1283 168 24718 9 <1 0 10 NONE NONE NONE NONE NONE NONE NONE NON	1184 154 23133 history2 8 0 0 history2 VLITE NONE NONE NONE NONE NONE NONE NONE NO



OIL ANALYSIS REPORT



С	FLUID PR	OPERTIES	method	limit/base	current	history1	history2	
	Visc @ 40°C	cSt	ASTM D445	106	80.2	83.3	85.1	
	SAMPLE	IMAGES	method	limit/base	current	history1	history2	
22					no image	no image	no image	
Jan 13/2 May 16/22 Oct28/22 Mat27/23	Bottom				no image	no image	no image	
	GRAPHS							
	Ferrous Allo 90 100 100 100 100 100 100 100	Jan1322 May16/22	0et28/22 Mar27/23	Dec18/23				
		Aug 17/21 Jan 13/22	0ct28/22	Dec18/23				
	Viscosity @	40°C						
	110 Base 30 90							
	80 Abnormal			<u> </u>				
	/0	Aug 17/21 + Jan 13/22 + May 16/22 +	0ct28/22 + Mar27/23 +	Dec18/23				
Laboratory Sample No. Lab Number Unique Number Certificate 12367 To discuss this sample report	: PCA0102226 : 06040862 r : 10796091 e : FLEET ; contact Custome	Recieve Diagnos Diagnos r Service at 1-	501 Madison Ave., Cary, NC 27513 Recieved : 20 Dec 2023 Diagnosed : 22 Dec 2023 Diagnostician : Don Baldridge vice at 1-800-237-1369.			100 INDEPENDENCE BLVD COLUMBIA, SC US 29210 Contact: GEORGE EDWARDS gedwards@nwwhite.com		
* - Denotes test methods that Statements of conformity to spe					JCGM 106:2012	?)	T: F:	