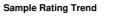


# **OIL ANALYSIS REPORT**





CHEVRON RPM SYNTHETIC GEAR 75W90 (3 mls)

## DIAGNOSIS

Machine Id DT655 Component

#### Recommendation

**Front Differential** 

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### 🔺 Wear

The copper level is abnormal. All other component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

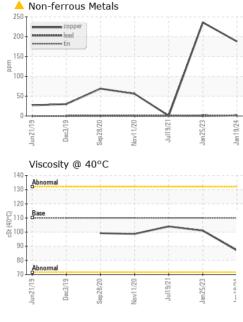
#### Fluid Condition

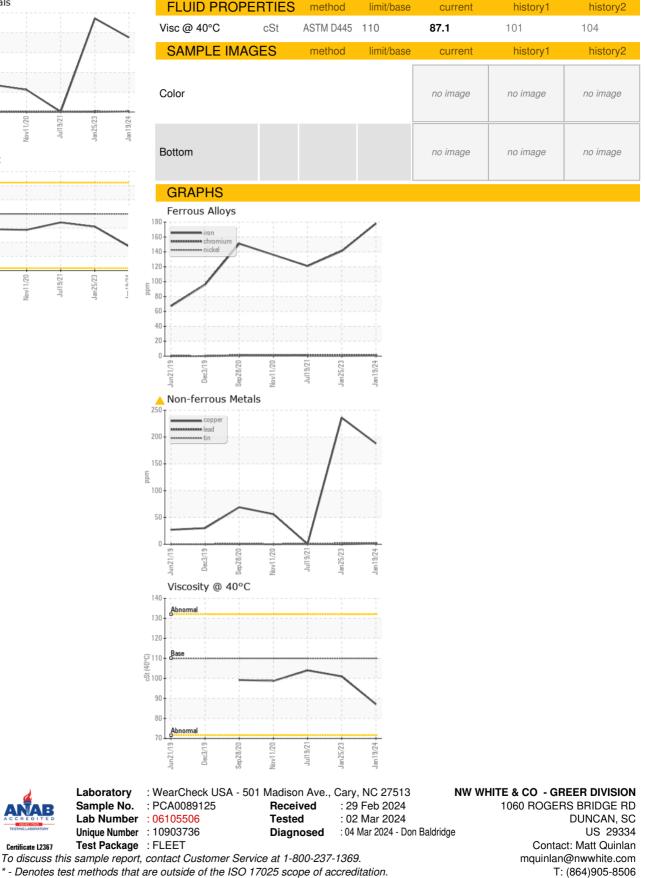
The condition of the oil is acceptable for the time in service.

Sample DateClient Info19 Jan 202425 Jan 202319 Jul 2021Machine AgemisClient Info1636631356450Oil AgemisClient Info874635944390Oil ChangedClient Info874635944390Not ChangedSample StatusImageClient InfoABNORMALABNORMALNot ChangedWaterWC Method>.2NEGNEGNEGWaterWC Method>.2NEGNEGNEGChromiumppmASTM05155m>10211NickelppmASTM05155m>10211NickelppmASTM05155m>10<10-1NickelppmASTM05155m>10200AluminumppmASTM05155m>10200AuminumppmASTM05155m>10200AdminumppmASTM05155m>10200AdminumppmASTM05155m>10000AdminumppmASTM05155m10000AdminumppmASTM05155m1010<11NonceppmASTM05155m1010<11NonceppmASTM05155m101011NonceppmASTM05155m106233Astm05155m10101<	(3 mis)		Jun2019	Dec2019 Sep2020	Nov2020 Jul2021 Jan2023	Jan2024	
Sample Date         Client Info         19 Jan 2024         25 Jan 2023         19 Jul 2021           Machine Age         mis         Client Info         153669         135845         0           Oil Age         mis         Client Info         87463         59439         0         Not Changed           Sample Status         Image         Client Info         Changed         Not Changed         Not Changed         Not Changed         Not Changed           Water         WC Method         >.2         NEG         NEG         NEG           Water         WC Method         >.2         NEG         NEG         NEG           Chromium         ppm         ASTM 05185n         >500         178         141         11           Nickel         ppm         ASTM 05185n         >10         2         1         1           Nickel         ppm         ASTM 05185n         >10         2         0         0           Auminum         ppm         ASTM 05185n         >25         13         2         0         0           Copper         ppm         ASTM 05185n         >10         2         0         0         0           Caddum         ppm         ASTM 051	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine AgemisClient Info1536691356450Oil AgemisClient Info87463594390Oil ChangedClient InfoChangedNot ChangdNot ChangdSample StatusIIABNORMALABNORMALNORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2WaterWC Method>.2NEGNEGNEGWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM D5165m>500178141121ChromiumppmASTM D5165m>10211NickelppmASTM D5165m>251320LaadppmASTM D5165m>251320LaadppmASTM D5165m>10220AntimonyppmASTM D5165m>10200VanadiumppmASTM D5165m>10200ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5165m17812000ADDITIVESmethodlimit/basecurrenthistory1178BariumppmASTM D5165m178226279MolybdenumppmASTM D5165m1761515PhosphorusppmASTM D5165m16623Suffurppm<	Sample Number		Client Info		PCA0089125	PCA0074075	PCA0050614
Oil Age     mis     Client Info     87463     59439     0       Oil Changed     Client Info     Changed     Not Changd     Not Changd       Sample Status     Imit Nos     ABNORMAL     NorRMAL     NorRMAL       CONTAMINATION     method     Imit Nos     current     history!     Mistory!       Water     WC Method     >2     NEG     NEG     NEG       Iron     ppm     ASTM 05165     >10     2     1     1       Nickel     ppm     ASTM 05165     >10     2     1     1       Nickel     ppm     ASTM 05165     >10     <1	Sample Date		Client Info		19 Jan 2024	25 Jan 2023	19 Jul 2021
Oil Changed Sample StatusClient InfoChanged ABNORMALNot Changed ABNORMALNot Changed ABNORMALNot Changed NORMALCONTAMINATIONmethodimit/basecurrenthistory1history2WaterWC Method>.2NEGNEGNEGWEAR METALSmethodimit/basecurrenthistory1history2IronppmASTM D5185n>500178111111ChromiumppmASTM D5185n>10<1	Machine Age	mls	Client Info		163669	135645	0
Sample Status         Method         Method         Method         ABNORMAL         ABNORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >.2         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >500         178         141         121           Chromium         ppm         ASTM D5185m         >10         2         1         1           Nickel         ppm         ASTM D5185m         >10         <1	Oil Age	mls	Client Info		87463	59439	0
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >.2         NEG         NEG         NEG           Wear ppm         Method         >.2         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >500         178         141         121           Chromium         ppm         ASTM 05185m         >10         <1	Oil Changed		Client Info		Changed	Not Changd	Not Changd
Water         WC Method         >.2         NEG         NEG         NEG           WeAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >500         178         141         121           Chromium         ppm         ASTM 05185m         >10         2         1         1           Nickel         ppm         ASTM 05185m         >10         <1	Sample Status				ABNORMAL	ABNORMAL	NORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >10         2         141         121           Chromium         ppm         ASTM D5185m         >10         2         1         1           Nickel         ppm         ASTM D5185m         >10         <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron         ppm         ASTM D5185m         >500         178         141         121           Chromium         ppm         ASTM D5185m         >10         2         1         1           Nickel         ppm         ASTM D5185m         >10         <1	Water		WC Method	>.2	NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >10         2         1         1           Nickel         ppm         ASTM D5185m         >10         <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >10         <1         0         <1           Titanium         ppm         ASTM D5185m         <	Iron	ppm	ASTM D5185m	>500	178	141	121
Titanium         ppm         ASTM D5185m         Q         C1         C1 <thc1< th=""> <thc1< th=""></thc1<></thc1<>	Chromium	ppm	ASTM D5185m	>10	2	1	1
SilverppmASTM D5185m000AluminumppmASTM D5185m>251320LeadppmASTM D5185m>2520<1	Nickel	ppm	ASTM D5185m	>10	<1	0	<1
Aluminum         ppm         ASTM D5185m         >25         13         2         0           Lead         ppm         ASTM D5185m         >25         2         0         <1	Titanium	ppm	ASTM D5185m		<1	<1	<1
LeadppmASTM D5185m<>2520<1CopperppmASTM D5185m<>10▲ 188▲ 236<1	Silver	ppm	ASTM D5185m		0	0	0
LeadppmASTM D5185m< >2520<1CopperppmASTM D5185m>100▲188▲236<1	Aluminum	ppm	ASTM D5185m	>25	13	2	0
TinppmASTM D5185m>10220AntimonyppmASTM D5185m>50VanadiumppmASTM D5185m0000CadmiumppmASTM D5185m0000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m178226279BariumppmASTM D5185m10<1	Lead	ppm	ASTM D5185m	>25	2	0	<1
TinppmASTM D5185m>10220AntimonyppmASTM D5185m>500VanadiumppmASTM D5185m0000CadmiumppmASTM D5185mImit/basecurrenthistory1history2BoronppmASTM D5185m178226279BariumppmASTM D5185m10-102MolybdenumppmASTM D5185m10-1<1	Copper	ppm	ASTM D5185m	>100	<u> </u>	<b>2</b> 36	<1
AntimonyppmASTM D5185m>50VanadiumppmASTM D5185m000CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m178226279BariumppmASTM D5185m178226279BariumppmASTM D5185m10<1		ppm	ASTM D5185m	>10	2	2	0
VanadiumppmASTM D5185m000CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m178226279BariumppmASTM D5185m1002MolybdenumppmASTM D5185m1023ManganeseppmASTM D5185m10623CalciumppmASTM D5185m10623CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m1881131SulfurppmASTM D5185m227452728720687SodiumppmASTM D5185m2020<1	Antimony		ASTM D5185m	>5			0
CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m178226279BariumppmASTM D5185m10<1	,		ASTM D5185m		0	0	0
BoronppmASTM D5185m178226279BariumppmASTM D5185m102MolybdenumppmASTM D5185m10<1	Cadmium		ASTM D5185m		0	0	0
BariumppmASTM D5185m102MolybdenumppmASTM D5185m10<1	ADDITIVES		method	limit/base	current	history1	history2
MolybdenumppmASTM D5185m10<1<1<1ManganeseppmASTM D5185m2575MagnesiumppmASTM D5185m10623CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m181131SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>2020<1	Boron	ppm	ASTM D5185m		178	226	279
ManganeseppmASTM D5185m22575MagnesiumppmASTM D5185m10623CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m142113471376SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>2020<1	Barium	ppm	ASTM D5185m		1	0	2
ManganeseppmASTM D5185m22575MagnesiumppmASTM D5185m10623CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m142113471376SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>2020<1	Molybdenum	ppm	ASTM D5185m		10	<1	<1
MagnesiumppmASTM D5185m10623CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m181131SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>2020<1			ASTM D5185m		25	7	5
CalciumppmASTM D5185m1671515PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m181131SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>2020<1	-		ASTM D5185m		106	2	3
PhosphorusppmASTM D5185m142113471376ZincppmASTM D5185m181111SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>75611912PotassiumppmASTM D5185m>2020<1	Calcium		ASTM D5185m		167	15	15
ZincppmASTM D5185m181131SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>75611912PotassiumppmASTM D5185m>2020<1	Phosphorus					1347	1376
SulfurppmASTM D5185m227452728720687CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m>75611912PotassiumppmASTM D5185m>2020<1	•				181		
SiliconppmASTM D5185m>75611912SodiumppmASTM D5185m422PotassiumppmASTM D5185m>2020<1							20687
SodiumppmASTM D5185m422PotassiumppmASTM D5185m>2020<1	CONTAMINAN	TS	method	limit/base	current	history1	history2
PotassiumppmASTM D5185m>2020<1VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONELIGHTNONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEG	Silicon	ppm	ASTM D5185m	>75	61	19	12
PotassiumppmASTM D5185m>2020<1VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONELIGHTNONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEG	Sodium		ASTM D5185m		4	2	2
White Metalscalar*VisualNONENONELIGHTNONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEG			ASTM D5185m	>20	2		<1
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	VISUAL		method	limit/base	current	history1	history2
Precipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Precipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	Precipitate	scalar	*Visual	NONE			
Debrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	Silt	scalar	*Visual	NONE		NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG			*Visual				
Appearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG	Sand/Dirt	scalar	*Visual				NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEG							
Emulsified Water scalar *Visual >.2 NEG NEG NEG							
		scalar	*Visual		NEG		



# **OIL ANALYSIS REPORT**





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

Certificate L2367

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