

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id Component

Fluid

**Rear Differential** 

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

Recomposition   Sample Number   Client linio   PCA017381   PCA007431   PCA007431     Biampie Data   Client linio   15 Sep 2021   28 Mar 2023   23 Aug 2023     All component wear rates are normal.   Coll Changed   min   Client linio   15 Sep 2021   28 Mar 2023	DIAGNOSIS	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Characterize   Sample Date   Client Info   15 seg 202   28 Mar 2028   28 Aug 2028   28 Aug 2028     All component wear rates are normal.   Contamination   Tissing 200   0   24998     Dill Age   mis   Client Info   T5 seg 202   28 Mar 2028   28 Aug 2028     There is no indication of any contamination in the oll   Sample Status   Client Info   76300   0   24998     Floid Condition   There is no indication of the oll is acceptable for the time is avios.   Marce Marc	Recommendation	Sample Number		Client Info		PCA0103251	PCA0091250	PCA0074811
War   Aliania Age   mis   Client Ino   17251   17211   101226     Containiation   Di Age   mis   Client Ino   76500   0   20126     The resonation of the oil is acceptable for the time in service.   Time   Client Ino   1   Normal   Astrony   <	Resample at the next service interval to monitor.	Sample Date		Client Info		15 Sep 2023	28 Mar 2023	23 Aug 2022
All component wear rates are normal. Contamination Cilent Info 7600 0 243285   Coll Changed Cilent Info Changed NorMAL ABNORMAL ABNORMAL   There is no indication of any contamination in the oll. Imm pm ASTM 05155 -870 168 144 134   The condition of the oil is acceptable for the time in service. Imm pm ASTM 05155 -870 168 144 134   Chromum ppm ASTM 05155 -870 169 144 134   Chromum ppm ASTM 05155 -870 160 1 <td>Wear</td> <td>Machine Age</td> <td>mls</td> <td>Client Info</td> <td></td> <td>152645</td> <td>127511</td> <td>101226</td>	Wear	Machine Age	mls	Client Info		152645	127511	101226
Containation   Olichanged   Clent Info   Clent Info   NoRMAL   ABKORMAL   ABKORMAL     Fue condition of the oil is acceptable for the time in service.   The method   method   method   method   method   1   <1	All component wear rates are normal.	Oil Age	mls	Client Info		76300	0	24926
There is no indication of any contamination in feal   Sample Status   NORMAL   ABNORMAL   ABNORMAL     Fluid Condition   The condition of the oil is acceptable for the time is service.   Indice of the oil is acceptable for the oil is acceptabl	Contamination	Oil Changed		Client Info		Changed	Not Changd	Not Changd
URL WEAR METALS method cm/dbase current history1 history2   Fue condition of the oil is acceptable for the time in service. Im ppm ASTU (585m) >470 159 1.4 1.34   Nickel ppm ASTU (585m) >25 7 7 4   Nickel ppm ASTU (585m) >26 7 7 4   Silver ppm ASTU (585m) >25 0 0 0   Auminium ppm ASTU (585m) >26 0 0 0   Quere ppm ASTU (585m) >25 0 0 0 0   Quere ppm ASTU (585m) >25 0 1 1 1 1 1 1 1 1 1 1 1 1 1	There is no indication of any contamination in the	Sample Status				NORMAL	ABNORMAL	ABNORMAL
Fluid Condition   The condition of the oil is acceptable for the time in service.   Internal of the oil is acceptable for the time in service.   Internal of the oil is acceptable for the time in service.   Internal of the oil is acceptable for the time in service.   STM DSSss   >870   169   1/4   13/4     Nickel   ppm   ASTM DSSss   >870   1   -1   -1   -1     Nickel   ppm   ASTM DSSss   >25   7   7   -4     Silver   ppm   ASTM DSSss   >44   -1   0   -1   0   -1     Nickel   ppm   ASTM DSSss   >50   0   0   0   0   0     Aurininum   ppm   ASTM DSSss   >50   12   12   12   12   12   12   12   12   12   12   12   12   12   12   12   12	oil.		۹	method	limit/base	current	history1	history2
The condition of the oil is acceptable for the time in service. ppm ASI/U (1958) 98/U 1eg 1.4 1.4   Service. ppm ASI/U (1958) 98/U 1 -1 41   Nickel ppm ASI/U (1958) 9.4 -1 0 -1 0 0   Silver ppm ASI/U (1958) >4.4 -1 0 0 0   Lead ppm ASI/U (1958) >4.0 5 2 0 0   Copper ppm ASI/U (1958) >4.0 5 0	Fluid Condition		0		070	current	Thistory I	104
service.   Unromitum   ppm   //situation   >s   1   <1	The condition of the oil is acceptable for the time in	Iron	ppm	ASTM D5185m	>870	169	144	134
Nickeli ppm ASTM 0518m >2-5 7 7 4   Sliver ppm ASTM 0518m -1 0 0   Aluminum ppm ASTM 0518m >40 5 2 2   Lead ppm ASTM 0518m >50 0 0 0   Copper ppm ASTM 0518m >55 0 0 0   Vanadium ppm ASTM 0518m >5 0 0 0   Vanadium ppm ASTM 0518m >5 0 0 0 0   Cadmium ppm ASTM 0518m 0 0 0 0 1   Monganese ppm ASTM 0518m 215 207 222 2   Marganese ppm ASTM 0518m 12 12 12 12   Marganese ppm ASTM 0518m 107 106 95 2365 1314   Zinc ppm ASTM 0518m 285 103 100 88   Sulfur ppm ASTM 0518m 220	service.	Chromium	ppm	ASTM D5185m	>8	1	<	<
Intentium ppm ASIM 0586m - 1 0 <1		NICKEI	ppm	ASTM D5185m	>25	1	/	4
Silver ppm Astmonum ppm Astmostics -40 5 2 2   Lead ppm ASTMOSISEs >40 5 2 2   Lead ppm ASTMOSISEs >50 0 0 0   Copper ppm ASTMOSISEs >55 0 0 0   Vanadium ppm ASTMOSISEs >5 0 0 0 0   Cadmium ppm ASTMOSISEs 0 0 0 0 0   ADDITIVES method limit/base current history! history! history! 12 12 12 12 12 12 12 14 14 14 14 14 14 14 14 14 14 14 14 15 11 16 14		Litanium	ppm	ASTM D5185m	>4	<1	0	<1
Autminum ppm Astitution ppm		Silver	ppm	ASTM D5185m	40	<1	0	0
Lead ppm ASTM 0516m 2-0 0 0 0   Copper ppm ASTM 05185m 5-0 0 0 0   Vanadium ppm ASTM 05185m 5-0 0 0 0   Cadmium ppm ASTM 05185m 0 0 0 0   ADDITIVES method imit/base current history1 history2   Boron ppm ASTM 05185m 0 0 0 1   Molybdenum ppm ASTM 05185m 12 12 12 12   Magnesee ppm ASTM 05185m 107 106 95   Calcium ppm ASTM 05185m 107 106 95   Calcium ppm ASTM 05185m 104 135.0 131.4   Zinc ppm ASTM 05185m 1404 135.0 131.4   Zinc ppm ASTM 05185m 26783 25056 21028   CONTAMINANTS mothod imit/base current history1 history2   Silicon		Aluminum	ppm		>40	5	2	2
Cupper   Spint   ASTM DS185m   2-0         Tin   ppm   ASTM DS185m   0   0   0   0     Vanadium   ppm   ASTM DS185m   0   0   0   0     Cadmium   ppm   ASTM DS185m   0   0   0   0     ADDITIVES   method   limit/Dase   current   history1   history1     Boron   ppm   ASTM DS185m   0   0   0   1     Molybdenum   ppm   ASTM DS185m   12   12   12   12     Margnesium   ppm   ASTM DS185m   107   106   95     Calcium   ppm   ASTM DS185m   107   106   95     Calcium   ppm   ASTM DS185m   149   156   144     Zino   ppm   ASTM DS185m   26783   25056   21028     CONTAMINANTS   method   limit/base   current   history1   history1 <t< td=""><td></td><td>Coppor</td><td>ppm</td><td>ASTM DE105</td><td>&gt;20</td><td>-1</td><td>0</td><td>U 1</td></t<>		Coppor	ppm	ASTM DE105	>20	-1	0	U 1
Init   ppm   ASTM 05165m   0   0   0   0     Variadium   ppm   ASTM 05165m   0   0   0   0     ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM 05165m   0   0   1   1     Molybdenum   ppm   ASTM 05165m   0   0   1   1     Molybdenum   ppm   ASTM 05165m   0   0   1   1     Magnesium   ppm   ASTM 05165m   107   106   95   1   1   1   164     Phosphorus   ppm   ASTM 05165m   180   171   164   1   156   148   1314   1 </td <td></td> <td>Copper</td> <td>ppm</td> <td>ASTM D5100III</td> <td>&gt;00</td> <td>&lt;1</td> <td>0</td> <td>&lt;1</td>		Copper	ppm	ASTM D5100III	>00	<1	0	<1
Variaduulini Cadmium ppmppmASTM 05185m000ADDITIVES Barium Molybdenum ppmppmASTM 05185m215207222Barium Molybdenum ppmppmASTM 05185m001Molybdenum Agranese ppmppmASTM 05185m121212Magnesium ProsphorusppmASTM 05185m10710655Calcium CalciumppmASTM 05185m110710655Calcium ProsphorusppmASTM 05185m140413501314Zinc SuffurppmASTM 05185m149156148Suffur VisualppmASTM 05185m2000Potassium VisualppmASTM 05185m2200Potassium VisualppmASTM 05185m2200Potassium VisualppmASTM 05185m2200Potassium VisualppmASTM 05185m2200Potassium 		Vanadium	ppm	ASTM DE105m	>0	0	0	0
ADDITIVESmethodimit/basecurrenthistory1history2BoronppmASTM D5185n215207222BariumppmASTM D5185n001MolybdenumppmASTM D5185n121212MagnesiumppmASTM D5185n1222MagnesiumppmASTM D5185n10710695CalciumppmASTM D5185n10710695CalciumppmASTM D5185n149156148ZineppmASTM D5185n149156148SulfurppmASTM D5185n267832505621028CONTAMINANTSmethodimit/basecurrenthistory1history2SiliconppmASTM D5185n>201<1		Codmium	ppm	ASTM D5100III		0	0	0
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m215207222BariumppmASTM D5185m0001MolybdenumppmASTM D5185m121212ManganeseppmASTM D5185m12222MagnesiumppmASTM D5185m10710695CalciumppmASTM D5185m100413501314ZineppmASTM D5185m140413501314ZineppmASTM D5185m267832505621028CONTAMINANTSmethodimit/basecurrenthistory1history2SiliconppmASTM D5185m2201<1		Cadmium	ррп	ASTIVI DOTODITI		0	0	0
Boron   ppm   ASTM D5185m   215   207   222     Barium   ppm   ASTM D5185m   0   0   1     Molybdenum   ppm   ASTM D5185m   12   12   12     Magnesse   ppm   ASTM D5185m   107   106   95     Calcium   ppm   ASTM D5185m   107   106   95     Calcium   ppm   ASTM D5185m   1404   1350   1314     Zinc   ppm   ASTM D5185m   1404   1350   1314     Zinc   ppm   ASTM D5185m   103   100   88     Sulfur   ppm   ASTM D5185m   22   0   0     Potassium   ppm   ASTM D5185m   23   103   100   88     Sodium   ppm   ASTM D5185m   20   1   <1		ADDITIVES		method	limit/base	current	history1	history2
Barium   ppm   ASTM 05185n   0   0   1     Molybdenum   ppm   ASTM 05185n   12   12   12     Manganese   ppm   ASTM 05185n   107   106   95     Calcium   ppm   ASTM 05185n   107   106   95     Calcium   ppm   ASTM 05185n   1404   1350   1314     Zinc   ppm   ASTM 05185n   1404   1350   1314     Sulfur   ppm   ASTM 05185n   149   156   148     Sulfur   ppm   ASTM 05185n   26783   25056   21028     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM 05185n   >20   1   <1		Boron	ppm	ASTM D5185m		215	207	222
Molybdenum ppm ASTM D5185n 12 12 12   Marganese ppm ASTM D5185n 107 106 95   Calcium ppm ASTM D5185n 107 106 95   Calcium ppm ASTM D5185n 180 171 164   Phosphorus ppm ASTM D5185n 1404 1350 1314   Zinc ppm ASTM D5185n 1404 1350 1314   Zinc ppm ASTM D5185n 26783 25056 21028   CONTAMINANTS method limit/base current history1 history2   Silicon ppm ASTM D5185n >20 1 -1 1   VISUAL method limit/base current history1 history2   White Metal scalar visual NONE NONE NONE NONE   Yellow Metal scalar visual NONE NONE NONE NONE NONE   Yellow Metal scalar visual NONE NONE NONE NONE		Barium	ppm	ASTM D5185m		0	0	1
ManganeseppmASTM D5185m222MagnesiumppmASTM D5185m10710695CalciumppmASTM D5185m180171164PhosphorusppmASTM D5185m140413501314ZincppmASTM D5185m1409156148SulfurppmASTM D5185m257832505621028CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m2200PotassiumppmASTM D5185m2200PotassiumppmASTM D5185m2200PotassiumppmASTM D5185m201<1		Molybdenum	ppm	ASTM D5185m		12	12	12
Magnesium ppm ASTM D5185m 107 106 95   Calcium ppm ASTM D5185m 180 171 164   Phosphorus ppm ASTM D5185m 1404 1350 1314   Zinc ppm ASTM D5185m 149 156 148   Sulfur ppm ASTM D5185m 26783 25056 21028   CONTAMINANTS method imit/base current history1 history2   Silicon ppm ASTM D5185m >285 103 100 88   Sodium ppm ASTM D5185m >20 1 <1		Manganese	ppm	ASTM D5185m		2	2	2
CalciumppmASTM D5185m180171164PhosphorusppmASTM D5185m140413501314ZincppmASTM D5185m149156148SulfurppmASTM D5185m267832505621028CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m2200PotassiumppmASTM D5185m2200PotassiumppmASTM D5185m>201<1		Magnesium	ppm	ASTM D5185m		107	106	95
PhosphorusppmASTM D5185m140413501314ZincppmASTM D5185m149156148SulfurppmASTM D5185m267832505621028CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>28510310088SodiumppmASTM D5185m>28510310088SodiumppmASTM D5185m>201<1		Calcium	ppm	ASTM D5185m		180	171	164
ZincppmASTM D5185m149156148SulfurppmASTM D5185m267832505621028CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>28510310088SodiumppmASTM D5185m>201<1		Phosphorus	ppm	ASTM D5185m		1404	1350	1314
SulfurppmASTM D5185m267832505621028CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>28510310088SodiumppmASTM D5185m200PotassiumppmASTM D5185m>201<1		Zinc	ppm	ASTM D5185m		149	156	148
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>28510310088SodiumppmASTM D5185m>201<1		Sulfur	ppm	ASTM D5185m		26783	25056	21028
SiliconppmASTM D5185m<>28510310088SodiumppmASTM D5185m200PotassiumppmASTM D5185m<>201<1		CONTAMINAN	TS	method	limit/base	current	history1	history2
SodiumppmASTM D5185m200PotassiumppmASTM D5185m>201<11VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONEAppearancescalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLPrecipified Waterscalar*Visual>.2NEGNEGFree Waterscalar*Visual>.2NEGNEGFLUID PROPERTIESmethodimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Silicon	ppm	ASTM D5185m	>285	103	100	88
PotassiumppmASTM D5185m>201<11VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONEYrecipitatescalar*VisualNONENONENONENONENONENONESiltscalar*VisualNONENONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONENONEOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLFree Waterscalar*Visual>.2NEGNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc@ 40°CcStASTM D44510683.786.088.8		Sodium	ppm	ASTM D5185m		2	0	0
VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc@ 40°CcStASTM D44510683.786.088.8		Potassium	ppm	ASTM D5185m	>20	1	<1	1
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONENONESiltscalar*VisualNONENONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGNEGFree Waterscalar*VisualNEGNEGNEGNEGVisc@ 40°CcStASTM D44510683.786.088.8		VISUAL		method	limit/base	current	history1	history2
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEGNEGVisc @ 40°CcStASTM D44510683.786.088.8		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitatescalar*VisualNONENONENONENONENONESiltscalar*VisualNONENONENONENONENONENONEDebrisscalar*VisualNONENONENONEMODERMODERSand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualImit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONEMODERMODERSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLModerscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGFree Waterscalar*VisualNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Debrisscalar*VisualNONENONEMODER▲ MODERSand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Debris	scalar	*Visual	NONE	NONE	A MODER	A MODER
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualImit/baseNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Waterscalar*Visual>.2NEGNEGFree Waterscalar*VisualNEGNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683.786.088.8		Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Waterscalar*VisualNEGNEGFLUID PROPERTIESmethodlimit/basecurrenthistory1history2Visc @ 40°CcStASTM D44510683 786 088 8		Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
FLUID PROPERTIES method limit/base current history1 history2   Visc @ 40°C cSt ASTM D445 106 83 7 86 0 88 8		Free Water	scalar	*Visual		NEG	NEG	NEG
Visc @ 40°C c.St ASTM D445 106 83 7 86.0 88.8		FLUID PROPE	RTIES	method	limit/base	current.	history1	history2
		Visc @ 40°C	cSt	ASTM D445	106	83.7	86.0	88.8

Report Id: NWWPIE [WUSCAR] 05955604 (Generated: 09/21/2023 13:41:27) Rev: 1

Submitted By: Under NWWDUN - James Threatt



## **OIL ANALYSIS REPORT**

SAMPLE IMAGES





\* - 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)

Certificate L2367

F: