

Machine Id 857-4975 Component Diesel Engine Fluid CHEVRON DELO 400 SAE 10W30 (--- GAL)

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Sample Data Client into RPD013332 Automate interval to monitor. Please specify the Client into into into into into into into in	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Reasmple at the next service interval to monitor. Please specify the component make and model with your next sample. Sample Date = Clint Into<							,	
Component make and model with your next sample. Machine Age In his Collent Info 622 9667		•				20 Nov 2023	22 Sep 2023	
Filter Age Ins Client Info No No<			hrs	Client Info		482		
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WEAR Iron ppm ASTMD5185m >100 99 3.3 Metal levels are typical for a new component breaking in. Trom um ppm ASTMD5185m >20 1 <1 Nickel ppm ASTMD5185m >20 1 <1 Nickel ppm ASTMD5185m >20 1 <1 Silver ppm ASTMD5185m >20 7 4 Lead ppm ASTMD5185m >20 7 4 Lead ppm ASTMD5185m >20 7 4 Vanadium ppm ASTMD5185m >40 0 Vanadium ppm ASTMD5185m >40 0 Vanadium ppm ASTMD5185m >20 10 5 Vanadium ppm ASTMD5185m >20 10 5 Vanadium potassium		Filter Changed		Client Info		N/A	Not Changd	
Metal levels are typical for a new component breaking in. Chromium Nickel ppm ASTM D5185m 20 1 <1		Sample Status				NORMAL	NORMAL	
Metal levels are typical for a new component breaking in. Chromium Nickel ppm ASTM D5185m 20 1 <1	WEAR	Iron	ppm	ASTM D5185m	>100	69	33	
Metal levels are typical for a new component breaking in. Nickel pp ASTM D5180 -4 1 -1 Titanium ppm ASTM D5180 -7 4 Silver ppm ASTM D5180 -20 7 4 Aluminum ppm ASTM D5180 -20 7 4 Copper ppm ASTM D5180 -300 23 17 Vanadium ppm ASTM D5180 -300 23 17 Vanadium ppm ASTM D5180 -300 23 17 Vanadium ppm ASTM D5180 -50 1 <-1 Vanadium ppm ASTM D5180 -52 23 18 There is no indication of any contamination in the oil. Silicon ppm ASTM D5180 -52 23 16 Solidan Ast Siliton Ast Siliton Silito Scalit Siliton		Chromium		ASTM D5185m	>20			
Titanium ppm ASTM 05185n								
Silver pp ASTM D518m >3 c1 0		Titanium		ASTM D5185m		<1	<1	
Aluminum ppm ASTM D518m >20 7 4 Laad ppm ASTM D518m >30 0 <1 Copper ppm ASTM D518m >30 0 <1 Tin ppm ASTM D518m >15 1 <1 <1 White Metal scalar "Visual NONE NONE NONE NONE White Metal scalar "Visual NONE NONE NONE There is no indication of any contamination in the oil. Silicon ppm ASTM D518m >20 10 5 Water WC Method >02 NEG NEG NEG Silicon % %STM D58m >30 0.7 0.4 Water WC Method >02 NEG NEG Silicon %% %STM D784 >20 13.8 Sord % <th>Silver</th> <th></th> <th>ASTM D5185m</th> <th>>3</th> <th><1</th> <th>0</th> <th></th>		Silver		ASTM D5185m	>3	<1	0	
Lead ppm ASTM 05158 >-40 0		Aluminum		ASTM D5185m	>20	7	4	
Copper ppm ASTM 0518m >330 23 17 Tin ppm ASTM 0518m -15 1 <1 < Vanadium ppm ASTM 0518m -15 1 <1 < White Metal scalar Visual NONE NONE NONE Mite Metal scalar Visual NONE NONE NONE CONTAMINATION Silicon ppm ASTM 0518m >-25 23 18 Mater Wolkehd >0.2 NONE < Water Wolkehd >0.2 NEG NEG Glycol Wolkehd >0.2 NEG NEG Statt scalar Visual NONE NEG NEG Statt scalar Visual NONE NONE NONE NONE NONE Statt scalar Visual NONE NONE NONE <td< th=""><th>Lead</th><th></th><th></th><th></th><th>0</th><th><1</th><th></th></td<>		Lead				0	<1	
Tin pp ASTM D5185m -15 1 <1		Copper		ASTM D5185m	>330	23	17	
Vanadium ppm ASTM D5185m C <1				ASTM D5185m	>15	1	<1	
Yeilow Metal scalar Visual NONE NONE NONE CONTAMINATION pt ASTM 05185m >25 23 18 There is no indication of any contamination in the oil. Potassium ppm ASTM 05185m >20 10 5 Water WO Method >5 <1.0 <-1.0 Water WO Method >5 <1.0 <-1.0 Water WO Method >5 <1.0 <-1.0 Water WO Method >20 NEG NEG NEG Sott % % 'ASTM 07844 >3 0.7 0.4 Nitration Abs/cm 'ASTM 07844 >3 0.7 0.4 Sulfation Abs/cm 'ASTM 07844 >3 0.7 0.4 Sulfation Abs/cm 'ASTM 07844 >30 0.7 0.4 Sulfation Abs/cm		Vanadium		ASTM D5185m		<1	0	
Silicon ppm ASTM D5185m >25 23 18 There is no indication of any contamination in the oil. Potassium ppm ASTM D5185m >20 10 5 Fuel WC Method >5 <1.0 <1.0 Water WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Soft % %5 MSTM D5764 >3 0.7 0.4 Soft % %5 MSTM D7844 >3 0.7 0.4 Soft % scalar Visual NONE NONE NONE NONE NONE NONE Mopparance		White Metal			NONE	NONE	NONE	
Potassium ppm ASTM 05185m >20 10 5 Fuer WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium ppm ASTM 05185m >20 10 5 Fuer WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0								
Fuel WC Method >5 <1.0 <1.0 Water WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Soot % % STM D784 >3 0.7 0.4 Nitration Abs/cm 'ASTM D784 >30 27.8 23.4 Sulfation Abs/tm 'ASTM D784 >30 27.8 23.4 Sulfation Abs/tm 'ASTM D784 >30 27.8 23.4 Sulfation Abs/tm 'ASTM D784 NONE NONE NONE Sand/Dirt scalar 'Visual NONE NONE NONE Sand/Dirt scalar 'Visual NORM NORML NORML Appearance scalar 'Visual NORM NORML NORML Boron pm ASTM D5185m S89 13.4 <th>CONTAMINATION</th> <th></th> <th>ppm</th> <th></th> <th></th> <th></th> <th></th> <th></th>	CONTAMINATION		ppm					
FLUID CONDITION Normalized and there is suitable alkalinity remaining in the oil is suitable for further service. Sodium Promote State Sta	There is no indication of any contamination in the oil.		ppm			10		
Glycol WC Method NEG NEG Soot % % *ASTM D7844 >3 0.7 0.4 Nitration Abs/rm *ASTM D7824 >20 13.8 11.1 Sulfation Abs/rm *ASTM D7824 >20 7.8 23.4 Sulfation Abs/rm *ASTM D7824 >20 NONE NONE NONE Sulfation Abs/rm *ASTM D743 >30 0.73 23.4 Sulfation Abs/rm *ASTM D743 NONE NONE NONE NONE Sulfation scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORM NORML NORML Appearance scalar *Visual NORM NORML NORML Boro ppm ASTM D5185m 2 4 Barium ppm								
Soot % % *ASTM D7844 >3 0.7 0.4 Nitration Abs/cm *ASTM D7624 >20 13.8 11.1 Sulfation Abs/cm *ASTM D7624 >20 13.8 11.1 Sulfation Abs/cm *ASTM D7614 >30 27.8 23.4 Sulfation Abs/cm *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Inthe condition of the oil is suitable alkalinity remaining in the oil. Boron ppm ASTM D5185m 7 0 <th></th> <th></th> <th></th> <th>>0.2</th> <th></th> <th></th> <th></th>					>0.2			
NitrationAbs/om*ASTM D7624>2013.811.1SulfationAbs/im*ASTM D7145>3027.823.4Siltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMNORMLNORMLEmulsified Waterscalar*VisualNORNORMLSodiumppmASTM D5185m5013.4BoronppmASTM D5185m10.313.4BariumppmASTM D5185m11.310.3MolybdenumppmASTM D5185m519ManganeseppmASTM D5185m11.310.3ManganesumppmASTM D5185m126067.861.5CalciumppmASTM D5185m126067.855.4PhosphorusppmASTM D5185m140080.113.4NoneppmASTM D5185m126067.865.5ManganesumppmASTM D5185m126067.855.4ManganesumppmASTM D5185m140080.113.45ManganesumppmASTM D5185m								
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Debrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORUNORMLNORMLNORMLNORMLOdorscalar*VisualNORUNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORNORMLNORMLNORMLFLUID CONDITIONSodiumppmASTM D5185m24BoronppmASTM D5185m24BariumppmASTM D5185m70MolydenumppmASTM D5185m113103ManganeseppmASTM D5185m159ManganeseppmASTM D5185m14111345PhosphorusppmASTM D5185m1260678554ZincppmASTM D5185m1400801733SulfurppmASTM D5185m1400801733								
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Emulsified Waterscalar*Visual>0.2NEGFLUID CONDITIONSodiumppmASTM D5185m24BoronppmASTM D5185m89134BariumppmASTM D5185m70MolybdenumppmASTM D5185m113103MaganeseppmASTM D5185m159MagnesiumppmASTM D5185m623615CalciumppmASTM D5185m14111345PhosphorusppmASTM D5185m1260678554ZincppmASTM D5185m1400801733SulfurppmASTM D5185m1400801733								
FLUID CONDITIONSodiumppmASTM D5185m24BoronppmASTM D5185m89134BariumppmASTM D5185m70BariumppmASTM D5185m113103MolybdenumppmASTM D5185m159ManganeseppmASTM D5185m623615CalciumppmASTM D5185m14111345PhosphorusppmASTM D5185m1260678554ZincppmASTM D5185m1400801733SulfurppmASTM D5185m1400801733								
Boron ppm ASTM D5185m 89 134 Barium ppm ASTM D5185m 7 0 Molybdenum ppm ASTM D5185m 113 103 Manganese ppm ASTM D5185m 15 9 Manganese ppm ASTM D5185m 623 615 Magnesium ppm ASTM D5185m 1411 1345 Calcium ppm ASTM D5185m 1260 678 5544 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 801 733		Emulsified Water	scalar	^ Visual	>0.2	NEG	NEG	
Boron ppm ASTM D5185m 89 134 Barium ppm ASTM D5185m 7 0 Molybdenum ppm ASTM D5185m 113 103 Manganese ppm ASTM D5185m 15 9 Manganese ppm ASTM D5185m 623 615 Magnesium ppm ASTM D5185m 1411 1345 Calcium ppm ASTM D5185m 1260 678 5544 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 801 733	FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	4	
Barium ppm ASTM D5185m 7 0 Molybdenum ppm ASTM D5185m 113 103 Manganese ppm ASTM D5185m 15 9 Magnesium ppm ASTM D5185m 623 615 Calcium ppm ASTM D5185m 1411 1345 Phosphorus ppm ASTM D5185m 1260 678 5544 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 801 733	The BN result indicates that there is suitable alkalinity remaining in the	Boron	ppm	ASTM D5185m		89	134	
Molybdenum ppm ASTM D5185m 113 103 Manganese ppm ASTM D5185m 15 9 Magnesium ppm ASTM D5185m 623 615 Calcium ppm ASTM D5185m 1411 1345 Phosphorus ppm ASTM D5185m 1260 678 554 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 2344 2077		Barium		ASTM D5185m		7	0	
Manganesse ppm ASTM D5185m 15 9 Magnesium ppm ASTM D5185m 623 615 Calcium ppm ASTM D5185m 1411 1345 Phosphorus ppm ASTM D5185m 1260 678 5544 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 2344 2077		Molybdenum		ASTM D5185m		113	103	
Calcium ppm ASTM D5185m 1411 1345 Phosphorus ppm ASTM D5185m 1260 678 554 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m 1400 2344 2077		Manganese	ppm	ASTM D5185m		15	9	
Phosphorus ppm ASTM D5185m 1260 678 554 Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m C 2344 2077		Magnesium		ASTM D5185m		623	615	
Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m Compared to the second		Calcium	ppm	ASTM D5185m		1411	1345	
Zinc ppm ASTM D5185m 1400 801 733 Sulfur ppm ASTM D5185m Compared to the second		Phosphorus	ppm	ASTM D5185m	1260	678	554	
		Zinc		ASTM D5185m	1400	801	733	
Oxidation Abs/.1mm *ASTM D7414 >25 30.4 21.7		Sulfur	ppm	ASTM D5185m		2344	2077	
		Oxidation	Abs/.1mm	*ASTM D7414	>25	30.4	21.7	

Base Number (BN) mg KOH/g ASTM D2896 10.1

ASTM D445 11.1

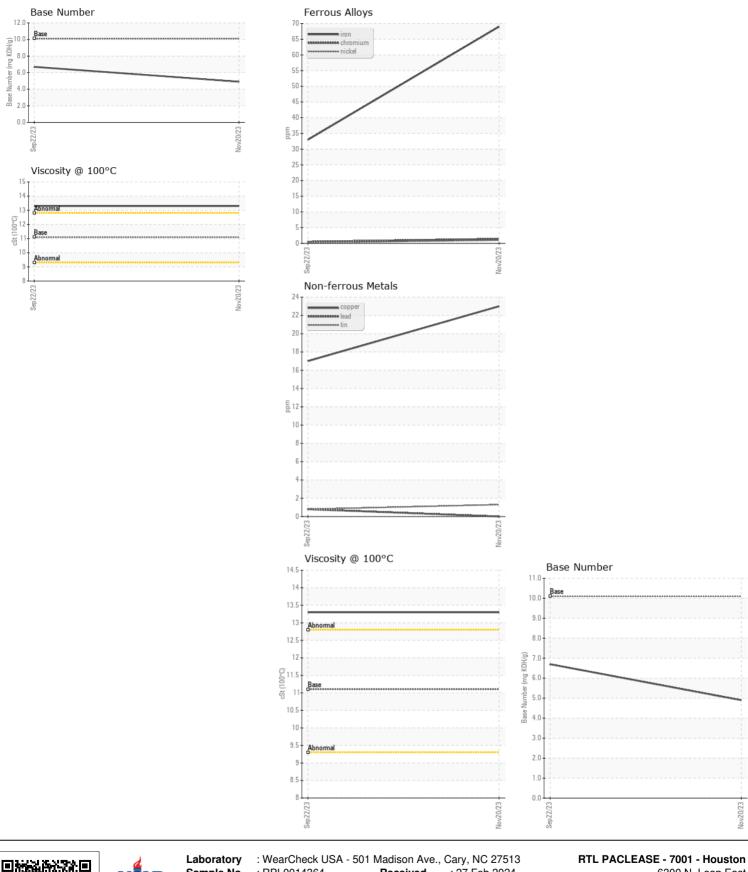
Visc@100°C cSt

6.7

13.3

4.9

13.3



Sample No. Received : 27 Feb 2024 6300 N. Loop East : RPL0014364 Lab Number : 06102351 : 28 Feb 2024 Houston, TX Tested Unique Number : 10900581 : 29 Feb 2024 - Sean Felton US 77026 Diagnosed Test Package : FLEET Contact: RODNEY BRIGGS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. briggsr@rushenterprises.com * - Denotes 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) F:

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Contact/Location: RODNEY BRIGGS - PAC7001