

# WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

#### Machine Id **TRUCK** Component **Gasoline Engine** Fluid **CASTROL GTX 10W30 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR	

All component wear rates are normal.

# CONTAMINATION

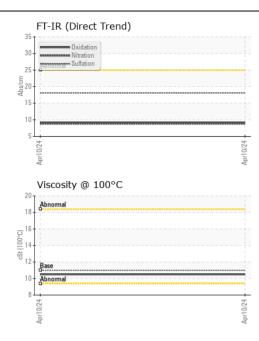
There is no indication of any contamination in the oil.

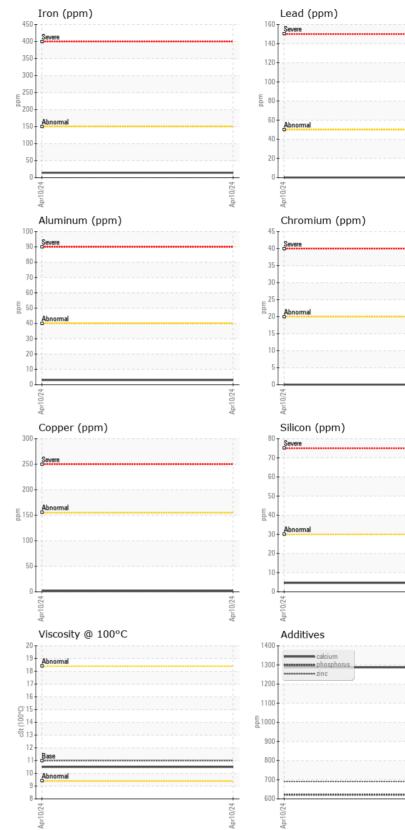
### FLUID CONDITION

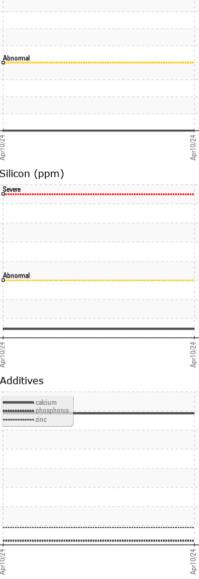
The condition of the oil is acceptable for the time in service.

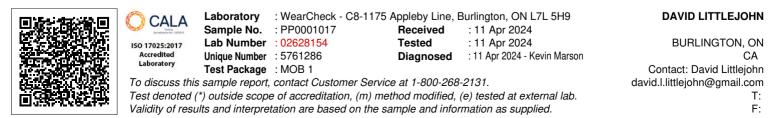
TestUOMMethodLimit/MCurrentHistory1History1Sample NumberClient Info10 Apr 2024Sample DateClient Info10 Apr 2024Machine AgekmsClient Info2715Filter AgekmsClient InfoChangedFilter AgekmsClient InfoChangedFilter ChangedClient InfoChangedSample StatusClient InfoNCRMALIronppmASTMD5185/m>200NickelppmASTMD5185/m>200NickelppmASTMD5185/m>200NickelppmASTMD5185/m>200AluminumppmASTMD5185/m>200NickelppmASTMD5185/m>200CopperppmASTMD5185/m>200SiliconppmASTMD5185/m>100SiliconppmASTMD5185/m>20C1SiliconppmASTMD5185/m>20C1SiliconppmASTMD5185/m>20C1SiliconppmASTMD5185/m>20C1SiliconppmASTMD5185/m>20C1SiliconppmASTMD5185/m>20C1 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Sample DateClient InfoIO Apr 2024Machine AgekmsClient Info2715Filter AgekmsClient InfoZ715Gil ChangedClient InfoChangedFilter ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusClient InfoNORMALIronppmASTMD5185(m)>14NickelppmASTMD5185(m)>200NickelppmASTMD5185(m)>200AluminumppmASTMD5185(m)>200AluminumppmASTMD5185(m)>500CopperppmASTMD5185(m)>100SiliconppmASTMD5185(m)>100SiliconppmASTMD5185(m)>20<1SoliconppmASTMD5185(m)>20<1SuitarioASTMD5185(m)>20<1SiliconppmASTMD5185(m)>20<1SuitarioASTMD5185(m)>20<1SuitarioASTMD5185(m)>20<1	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgekmsClient Info341949Cil AgekmsClient Info2715Filter AgekmsClient InfoChangedGil ChangedClient InfoChangedFilter ChangedQClient InfoChangedSample StatusVClient InfoNCRMALIronppmASTM05185(m)>1014ChromiumppmASTM05185(m)>200NickelppmASTM05185(m)>20AluminumppmASTM05185(m)>20AluminumppmASTM05185(m)>500LeadppmASTM05185(m)>500VanadiumppmASTM05185(m)>100SiliconppmASTM05185(m)>305SuitonppmASTM05185(m)>20<1SoliconppmASTM05185(m)>305SuitonppmASTM05185(m)>305SuitationAbs/cmASTM05185(m)>20<1SuitationAbs/cmASTM05185(m)>20<1SuitationAstm05185(m)>20<1	Sample Number		Client Info		PP0001017		
Oil AgekmsClient InfoZ715Filter AgekmsClient InfoZ715Oil ChangedClient InfoChangedFilter ChangedQClient InfoChangedSample StatusNORMALIronppmASTMDS185(m)>14NickelppmASTMDS185(m)>200NickelppmASTMDS185(m)>200SilverppmASTMDS185(m)>200AluminumppmASTMDS185(m)>200LeadppmASTMDS185(m)>100VanadiumppmASTMDS185(m)>305SiliconppmASTMDS185(m)>305VanadiumppmASTMDS185(m)>20<1VanadiumppmASTMDS185(m)>20<1VanadiumppmASTMDS185(m)>20<10VanadiumppmASTMDS185(m)>305VanadiumppmASTMDS185(m)>20<10VanadiumppmASTMDS185(m)>20<10SoliconppmASTMDS185(m)>20NEGSolicon	Sample Date		Client Info		10 Apr 2024		
Filter Age Oli ChangedKmsClient InfoZ715Gil ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusNORMALIronppmASTMD5/85(m)>1014ChromiumppmASTMD5/85(m)>200NickelppmASTMD5/85(m)>200NickelppmASTMD5/85(m)>20AlumiumppmASTMD5/85(m)>20AlumiumppmASTMD5/85(m)>500CopperppmASTMD5/85(m)>100VanadiumppmASTMD5/85(m)>305SiliconppmASTMD5/85(m)>305SuitationppmASTMD5/85(m)>20<1WaterWC Method>-0GlycolWC Method>-0SuitationAbs/rmASTMD5/85(m)>3018.1Sodi %%ASTMD784*POSuitationAbs/rmASTMD5/85(m)>20REGSuitationAbs/rmASTMD5/85(m)>20REGSo	Machine Age	kms	Client Info		341949		
Oli ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusNORMALIronppmASTM D5185(m)>1014ChromiumppmASTM D5185(m)>200NickelppmASTM D5185(m)>21TitaniumppmASTM D5185(m)>20SilverppmASTM D5185(m)>20AluminumppmASTM D5185(m)>200LeadppmASTM D5185(m)>500YanadiumppmASTM D5185(m)>500YanadiumppmASTM D5185(m)>305SiliconppmASTM D5185(m)>305FuelWC Method>4.0<WaterppmASTM D5185(m)>20GlycolWC Method>4.0Soto %%ASTM D7624'20REGSulfationAbs/rmASTM D5185(m)>4.018.1SulfationAbs/rmASTM D5185(m)>4.0Soto %%ASTM D5185(m)>2.0REGSulfationAbs/rmASTM D5185(m)>2.0AstSulfationAbs/rmASTM D5185(m)>2.0REGSodiumppm <td< th=""><th>Oil Age</th><th>kms</th><th>Client Info</th><th></th><th>2715</th><th></th><th></th></td<>	Oil Age	kms	Client Info		2715		
Filter Changed         Client Info         Changed            Sample Status         Client Info         NORMAL            Iron         ppm         ASTM D5185(m)         >150         14            Chromium         ppm         ASTM D5185(m)         >20         0            Nickel         ppm         ASTM D5185(m)         >5         <1            Nickel         ppm         ASTM D5185(m)         >2         0            Aluminum         ppm         ASTM D5185(m)         >2         0            Aluminum         ppm         ASTM D5185(m)         >20         0            Aluminum         ppm         ASTM D5185(m)         >20         0            Qapper         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >20         <1            Silicon         ppm         ASTM D5185(m)         >20         <1            Fuel         WC Method         >0.2         NEG             Glycol         WC Method </th <th>Filter Age</th> <th>kms</th> <th>Client Info</th> <th></th> <th>2715</th> <th></th> <th></th>	Filter Age	kms	Client Info		2715		
Sample Status         NORMAL             Iron         ppm         ASTM D5185(m)         >150         14             Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >5         <1             Titanium         ppm         ASTM D5185(m)         >2         0             Aluminum         ppm         ASTM D5185(m)         >2         0             Lead         ppm         ASTM D5185(m)         >50         0	Oil Changed		Client Info		Changed		
Iron         ppm         ASTM D5185(m)         >150         14            Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >5         <1             Titanium         ppm         ASTM D5185(m)         >2         0             Aluminum         ppm         ASTM D5185(m)         >2         0             Aluminum         ppm         ASTM D5185(m)         >2         0             Lead         ppm         ASTM D5185(m)         >50         0             Copper         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0	Filter Changed		Client Info		Changed		
Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >5         <1             Titanium         ppm         ASTM D5185(m)         >2         0             Silver         ppm         ASTM D5185(m)         >2         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >50         0             Copper         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >30         5             Silicon         ppm         ASTM D5185(m)         >20         <1             Fuel         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Soto %         %         ASTM D5185(m)         >40         <	Sample Status				NORMAL		
Chromium         ppm         ASTM D5185(m)         >20         0             Nickel         ppm         ASTM D5185(m)         >5         <1             Titanium         ppm         ASTM D5185(m)         >2         0             Silver         ppm         ASTM D5185(m)         >2         0             Aluminum         ppm         ASTM D5185(m)         >20         0             Lead         ppm         ASTM D5185(m)         >50         0             Copper         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >30         5             Silicon         ppm         ASTM D5185(m)         >20         <1             Fuel         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Soto %         %         ASTM D5185(m)         >40         <							
Nickel         ppm         ASTM D5185(m)         >5         <1			( )				
Titanium         ppm         ASTM D5185(m)         4            Silver         ppm         ASTM D5185(m)         >2         0            Aluminum         ppm         ASTM D5185(m)         >20         0            Lead         ppm         ASTM D5185(m)         >50         0            Copper         ppm         ASTM D5185(m)         >10         0            Yanadium         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >30         5             Vanadium         ppm         ASTM D5185(m)         >20         <1							
Nitholic Silver         ppm         ASTM D5185(m)         >2         0            Aluminum         ppm         ASTM D5185(m)         >40         3             Lead         ppm         ASTM D5185(m)         >50         0             Copper         ppm         ASTM D5185(m)         >10         0             Tin         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >30         5             Vanadium         ppm         ASTM D5185(m)         >20         <1				>5			
Aluminum         ppm         ASTM D5185(m)         >40         3            Lead         ppm         ASTM D5185(m)         >50         0            Copper         ppm         ASTM D5185(m)         >105         2            Tin         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >10         0            Silicon         ppm         ASTM D5185(m)         >20         <1            Potassium         ppm         ASTM D5185(m)         >20         <1            Fuel         WC Method         >0.2         NEG             Water         WC Method         >0.2         NEG             Soot %         %         ASTM D7844*         0             Sulfation         Abs/.m         ASTM D7844*         0             Sodium         ppm         ASTM D7845         >30         18.1             Sodium         ppm         ASTM D5185(m)         >400 <th></th> <th>ppm</th> <th>. ,</th> <th></th> <th></th> <th></th> <th></th>		ppm	. ,				
Lead         ppm         ASTM D5185(m)         >50         0            Copper         ppm         ASTM D5185(m)         >155         2             Tin         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >30         5             Silicon         ppm         ASTM D5185(m)         >30         5             Potassium         ppm         ASTM D5185(m)         >20         <1		ppm			-		
Copper         ppm         ASTM D5185(m)         >155         2             Tin         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0             Silicon         ppm         ASTM D5185(m)         >20         <1             Potassium         ppm         ASTM D5185(m)         >20         <1             Fuel         WC Method         >4.0         <1.0              Water         WC Method         >0.2         NEG              Soot %         %         ASTM D7844*         0              Nitration         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/.1mm         ASTM D71415*         >30         18.1             Sodium         ppm         ASTM D5185(m)         >400         2             Boron         ppm		ppm					
Tin         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >30         5             Silicon         ppm         ASTM D5185(m)         >30         5             Potassium         ppm         ASTM D5185(m)         >20         <1	Lead	ppm	ASTM D5185(m)		0		
Vanadium         ppm         ASTM D5185(m)         0            Silicon         ppm         ASTM D5185(m)         >30         5            Potassium         ppm         ASTM D5185(m)         >20         <1            Fuel         WC Method         >4.0         <1.0             Water         Image: WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Soot %         %         ASTM D7844*         0             Nitration         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/.1mm         ASTM D7624*         >20         8.8             Sodium         ppm         ASTM D5185(m)         >400              Sodium         ppm         ASTM D5185(m)         >400             Boron         ppm         ASTM D5185(m)         0             Manganese         ppm         ASTM D	Copper	ppm		>155	2		
Silicon         ppm         ASTM D5185(m)         >30         5             Potassium         ppm         ASTM D5185(m)         >20         <1             Fuel         WC Method         >4.0         <1.0             Water         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Soot %         %         ASTM D7844*         0             Nitration         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/.1m         ASTM D7624*         >20         8.8             Sulfation         Abs/.1m         ASTM D7624*         >20         8.8             Sodium         ppm         ASTM D5185(m)         >400         2             Boron         ppm         ASTM D5185(m)         >400             Molybdenum         ppm         ASTM D5185(m)         1		ppm	( )	>10	0		
Potassium         ppm         ASTM D5185(m)         >20         <1	Vanadium	ppm	ASTM D5185(m)		0		
Potassium         ppm         ASTM D5185(m)         >20         <1	Silicon	nnm	ASTM D5185(m)	>30	5		
Fuel         WC Method         >4.0         <1.0							
Water         WC Method         >0.2         NEG            Glycol         WC Method         NEG             Soot %         %         ASTM D7844*         0             Nitration         Abs/cm         ASTM D7824*         >20         8.8             Nitration         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/cm         ASTM D7115*         >30         18.1             Sodium         ppm         ASTM D5185(m)         >400         2             Sodium         ppm         ASTM D5185(m)         >400         2             Boron         ppm         ASTM D5185(m)         >400              Molybdenum         ppm         ASTM D5185(m)         0              Magnesium         ppm         ASTM D5185(m)         2000         1287 </th <th></th> <th>pp</th> <th></th> <th></th> <th></th> <th></th> <th></th>		pp					
GlycolWC MethodNEGSoot %%ASTM D7844*0NitrationAbs/cmASTM D7624*>208.8SulfationAbs/lmASTM D7624*>3018.1SulfationAbs/lmASTM D7415*>3018.1Emulsified WaterscalarVisual*>0.2NEGSodiumppmASTM D5185(m)>4002BoronppmASTM D5185(m)>400611BariumppmASTM D5185(m)0MolybdenumppmASTM D5185(m)-400MagnesiumppmASTM D5185(m)-<11PhosphorusppmASTM D5185(m)20001287ZincppmASTM D5185(m)1100691SulfurppmASTM D5185(m)1100691SulfurppmASTM D5185(m)1100691CxidationAbs/.1mASTM D5185(m)2259.1							
Soot %         %         ASTM D7844*         0             Nitration         Abs/cm         ASTM D7624*         >20         8.8             Sulfation         Abs/.1mm         ASTM D7624*         >30         18.1             Sulfation         Abs/.1mm         ASTM D7415*         >30         18.1             Emulsified Water         scalar         Visual*         >0.2         NEG             Sodium         ppm         ASTM D5185(m)         >400         2             Boron         ppm         ASTM D5185(m)         >400         1             Barium         ppm         ASTM D5185(m)         0              Malganese         ppm         ASTM D5185(m)         100              Magnesium         ppm         ASTM D5185(m)         2000         1287             Phosphorus         ppm         ASTM D5185(m)         1000         622             Zinc         p							
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SulfationAbs/.1mmASTM D7415*>3018.1Emulsified WaterscalarVisual*>0.2NEGSodiumppmASTM D5185(m)>4002BoronppmASTM D5185(m)>40061BariumppmASTM D5185(m)0MolybdenumppmASTM D5185(m)0ManganeseppmASTM D5185(m)<<11MagnesiumppmASTM D5185(m)20001287PhosphorusppmASTM D5185(m)1000622ZincppmASTM D5185(m)1100691SulfurppmASTM D5185(m)1100691OxidationAbs/.1mmASTM D5185(m)2259.1				>20			
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Sodium         ppm         ASTM D5185(m)         >400         2            Boron         ppm         ASTM D5185(m)         61             Barium         ppm         ASTM D5185(m)         0             Barium         ppm         ASTM D5185(m)         0             Molybdenum         ppm         ASTM D5185(m)         40             Manganese         ppm         ASTM D5185(m)          <1             Magnesium         ppm         ASTM D5185(m)         2000         1287             Phosphorus         ppm         ASTM D5185(m)         2000         622             Zinc         ppm         ASTM D5185(m)         1000         622             Sulfur         ppm         ASTM D5185(m)         1100         691             Oxidation         Abs/.1mm         ASTM D5185(m)         1794							
Boron         ppm         ASTM D5185(m)         61            Barium         ppm         ASTM D5185(m)         0            Molybdenum         ppm         ASTM D5185(m)         40            Manganese         ppm         ASTM D5185(m)         <1            Magnesium         ppm         ASTM D5185(m)         <1            Magnesium         ppm         ASTM D5185(m)         <525            Calcium         ppm         ASTM D5185(m)         2000         1287            Phosphorus         ppm         ASTM D5185(m)         1000         622            Zinc         ppm         ASTM D5185(m)         1100         691            Sulfur         ppm         ASTM D5185(m)         1100         691            Oxidation         Abs/.1mm         ASTM D5185(m)         1794							
Barium         ppm         ASTM D5185(m)         0            Molybdenum         ppm         ASTM D5185(m)         40            Manganese         ppm         ASTM D5185(m)         <1            Magnesium         ppm         ASTM D5185(m)         <11            Magnesium         ppm         ASTM D5185(m)         <525            Calcium         ppm         ASTM D5185(m)         2000         1287            Phosphorus         ppm         ASTM D5185(m)         1000         622            Zinc         ppm         ASTM D5185(m)         1100         691            Sulfur         ppm         ASTM D5185(m)         1100         691            Oxidation         Abs/.1mm         ASTM D5185(m)         127	Sodium	ppm			2		
Molybdenum         ppm         ASTM D5185(m)         40            Manganese         ppm         ASTM D5185(m)         <1            Magnesium         ppm         ASTM D5185(m)         <1            Magnesium         ppm         ASTM D5185(m)         525            Calcium         ppm         ASTM D5185(m)         2000         1287            Phosphorus         ppm         ASTM D5185(m)         1000         622            Zinc         ppm         ASTM D5185(m)         1100         691            Sulfur         ppm         ASTM D5185(m)         1100         691            Oxidation         Abs/.11m         ASTM D5185(m)         1794	Boron	ppm	ASTM D5185(m)		61		
Manganese         ppm         ASTM D5185(m)         <1	Barium	ppm	ASTM D5185(m)		0		
Magnesium         ppm         ASTM D5185(m)         525             Calcium         ppm         ASTM D5185(m)         2000         1287             Phosphorus         ppm         ASTM D5185(m)         1000         622             Zinc         ppm         ASTM D5185(m)         1100         691             Sulfur         ppm         ASTM D5185(m)         1100         691             Oxidation         Abs/.11m         ASTM D5185(m)         1100         691	Molybdenum	ppm	ASTM D5185(m)		40		
Calcium         ppm         ASTM D5185(m)         2000         1287             Phosphorus         ppm         ASTM D5185(m)         1000         622             Zinc         ppm         ASTM D5185(m)         1100         691             Sulfur         ppm         ASTM D5185(m)         1100         691             Oxidation         Abs/.1mm         ASTM D5185(m)         255         9.1	Manganese	ppm	ASTM D5185(m)		<1		
Phosphorus         ppm         ASTM D5185(m)         1000         622             Zinc         ppm         ASTM D5185(m)         1100         691             Sulfur         ppm         ASTM D5185(m)         1100         1794             Oxidation         Abs/.1mm         ASTM D7414*         >25         9.1	Magnesium	ppm	ASTM D5185(m)		525		
Zinc         ppm         ASTM D5185(m)         1100         691             Sulfur         ppm         ASTM D5185(m)         1100         1794             Oxidation         Abs/.1mm         ASTM D7414*         >25         9.1	Calcium	ppm	ASTM D5185(m)	2000	1287		
Sulfur         ppm         ASTM D5185(m)         1794             Oxidation         Abs/.1mm         ASTM D7414*         >25         9.1	Phosphorus	ppm	ASTM D5185(m)	1000	622		
Oxidation         Abs/.1mm         ASTM D7414*         >25         9.1	Zinc	ppm	ASTM D5185(m)	1100	691		
	Sulfur	ppm	ASTM D5185(m)		1794		
Visc @ 100°C cSt ASTM D7279(m) 11.0 10.5	Oxidation	Abs/.1mm	ASTM D7414*	>25	9.1		
	Visc @ 100°C	cSt	ASTM D7279(m)	11.0	10.5		

Contact/Location: David Littlejohn - DAVBUR2









Contact/Location: David Littlejohn - DAVBUR2 Page 2 of 2