

CONSTRUCTION EQUIPMENT SPM579695 VOLVO A45G 352632 - DIESEL ENGINE



Sample No: VCP386783

Oil Type: DIESEL ENGINE OIL SAE 15W40

Job No: SPM579695

VOLVO				
SAMPLE INFORMATION				
Sample Number	VCP386783	VCP387221	VCP379142	VCP340274
Sample Date	10 Jul 2023	27 Jan 2023	30 Jun 2022	30 Dec 2021
Machine Hours	2530	1617	1092	506
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

OIT CONDI.	TION				
Visc @ 100°C	cSt	13.1	■13.0	12.6	1 0.9
Base Number (BN)	mg KOH/g	■8.4	■8.8	■8.7	□9.6
Oxidation (PA)	%	54	59	65	85

CONTAN	MINATION				
Soot %	%	■0.6	■0.6	□ 0.6	□0.4
Nitration (PA)	%	65	73	73	63
Sulfation (PA)	%	51	54	56	67
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	■ 0.2
Silicon	ppm	4	6	9	■33
Sodium	ppm	46	2	□3	■ 3
Potassium	ppm	■ 3	- <1	□ 0	0

WEAR	METALS				
Iron	ppm	15	1 9	4 1	■33
Copper	ppm	2	3	■8	■32
Lead	ppm	■<1	1	2	2
Tin	ppm	■<1	2	2	4
Aluminum	ppm	1	1	1	2
Chromium	ppm	■<1	- <1	1	1
Molybdenum	ppm	61	60	57	■35
Nickel	ppm	■ 4	4	■8	4 9
Titanium	ppm	0	0	0	< 1
Silver	ppm	■<1	0	<1	0
Manganese	ppm	■<1	< 1	1	■ 3
Vanadium	ppm	0	0	0	0

ADDITI	VES				
Calcium	ppm	1052	■1060	■1208	■1382
Magnesium	ppm	■913	■976	■912	■397
Zinc	ppm	1207	■1311	1224	■985
Phosphorus	ppm	1023	□1036	■1000	■800
Barium	ppm	■ 0	□0	□0	□0
Boron	ppm	■0	- <1	7	4 3



A J MCDIRTT

P.O. BOX 781 STERLING, IL US 61081

Contact: SERVICE MANAGER

T: (815)631-1606 F:

Diagnosis

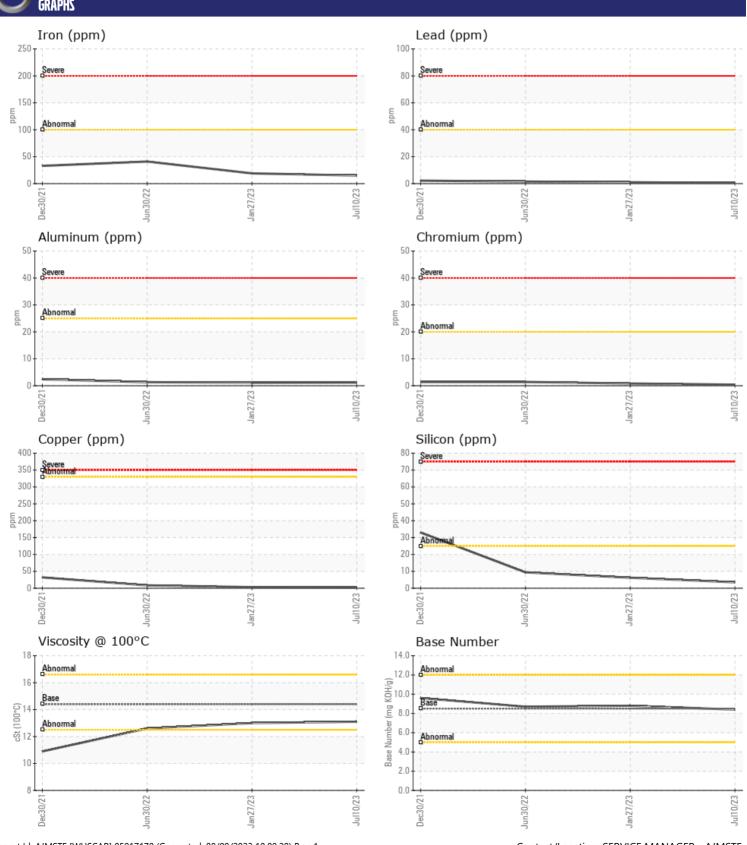
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot:AJMSTEUnique No:10589084Signed:Wes DavisReport Date:08 Aug 2023











CONSTRUCTION EQUIPMENT VOLVO A45G 352632 - TRANSMISSION (AUTO)



Sample No: VCP379074
Oil Type: DEXRON III

Job No:

SAMPLE	INFORMATION			
Sample Number		VCP379074	VCP349123	
Sample Date		30 Jun 2022	30 Dec 2021	
Machine Hours		1092	506	
Oil Hours		0	0	
Oil Changed		Changed	Not Changd	
Sample Status		ABNORMAL	NORMAL	
Sample Status		ADNORMAL	NORIVIAL	
VOLVO				
OIL COND	DITION			
Visc @ 40°C	cSt	■ 29.0	□28.9	
CONTAM	INATION			
Water	%	NEG	NEG	
Silicon	ppm	16	1 4	
Sodium	ppm	■ 5	□5	
Potassium	ppm	■ 4	3	
VOLVO				
WEAR M	PIAIS PATE			
Iron		48	□ 28	
Copper	ppm	■ 42	25	
Lead	ppm	1 0	0	
Tin	ppm	6	3	
Aluminum	ppm	24	12	
Chromium	ppm	■ 24 ■ <1	<1	
Molybdenum	ppm	■ <1	_	
Nickel	ppm	6	<1	
Titanium	ppm	0	0	
Silver	ppm	0	2	
	ppm			
Manganese	ppm	□ 7	0	
Vanadium	ppm	U	U	
VOLVO				
ADDITIV	ES			
Calcium	ppm	■83	7 3	
Magnesium	ppm	1	2	
Zinc	ppm	6	<u></u> 5	
Phosphorus	ppm	212	185	
Barium	ppm	O	0	
Boron	ppm	74	82	
	1-1-1-1			



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Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Moderate concentration of visible metal present. All component wear rates are normal. There is no indication of any contamination in the fluid. The condition of the fluid is acceptable for the time in service.

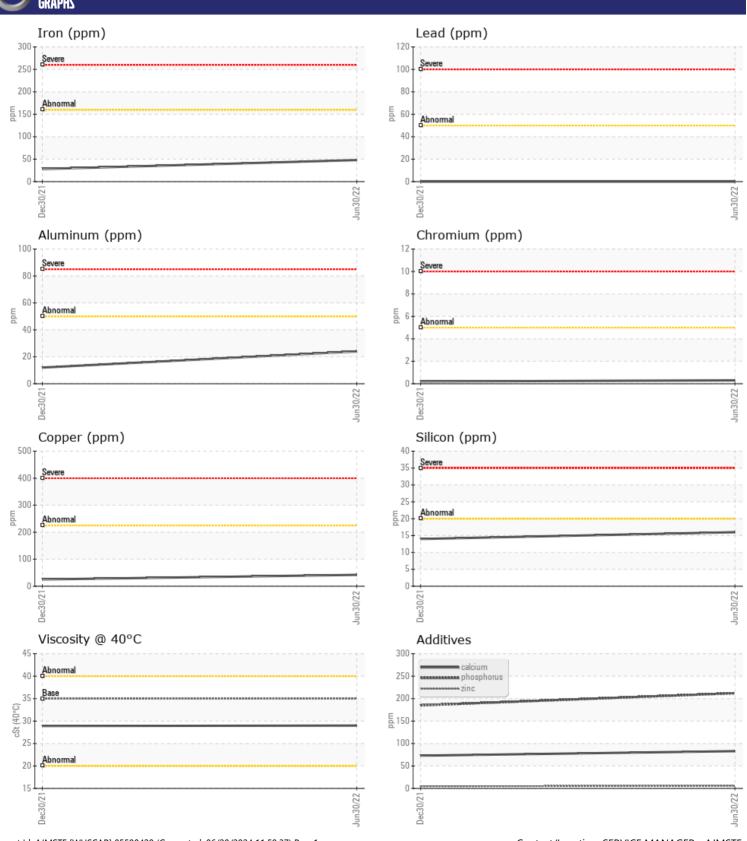
Depot: AJMSTE
Unique No: 10049876
Signed: Jonathan Hester
Report Date: 15 Jul 2022

Contact/Location: SERVICE MANAGER - AJMSTE











CONSTRUCTION EQUIPMENT SPM352632 VOLVO A45G 352632 - TRANSFER CASE



Sample No: VCP353601

Oil Type: VOLVO WET BRAKE TRANSAXLE OIL

Job No: SPM352632

VOLVO CAMPI F	INFORMATION			
	INI UMMATIUN			
Sample Number		VCP353601	 	
Sample Date		30 Jun 2022	 	
Machine Hours		1092	 	
Oil Hours		0	 	
Oil Changed		Not Changd	 	
Sample Status		NORMAL	 	
OIL CONI	DITION			
Visc @ 40°C	cSt	39.6	 	
CUNTAN	IINATION			
_				
Water	%	NEG	 	
Silicon	ppm	14	 	
Sodium	ppm	■11	 	
Potassium	ppm	2	 	
VOLVO				
WEAR M	IETALS			
Iron	ppm	9 1	 	
Copper	ppm	■ 1	 	
Lead	ppm	■<1	 	
Tin	ppm	■<1	 	
Aluminum	ppm	2	 	
Chromium	ppm	■ 4	 	
Molybdenum	ppm	6	 	
Nickel	ppm	■<1	 	
Titanium	ppm	0	 	
Silver	ppm	0	 	
Manganese	ppm	10	 	
Vanadium	ppm	0	 	
ADDITIV	ES			
Calcium	ppm	4285	 	
		1 5	 	
Magnesium	ppm	II 13	 	



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Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot:AJMSTEUnique No:10049868Signed:Jonathan HesterReport Date:15 Jul 2022

ppm

ppm

ppm

ppm

1702

1412

■0 **■**128

Zinc

Barium

Boron

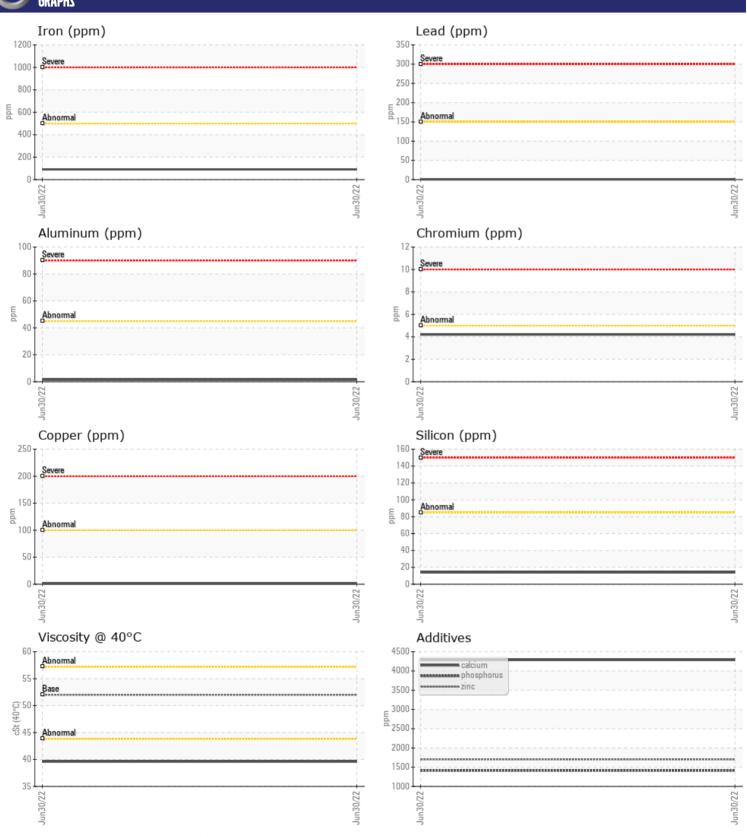
Phosphorus







GRAPH





CONSTRUCTION EQUIPMENT VOLVO A45G 352632 - HYDRAULIC SYSTEM



Sample No: VCP379141

Oil Type: VOLVO SUPER HYDRAULIC OIL 46

Job No:

SAMPLE INFORMATION			
Sample Number	VCP379141	 	
Sample Date	30 Jun 2022	 	
Machine Hours	1092	 	
Oil Hours	0	 	
Oil Changed	Not Changd	 	
Sample Status	NORMAL	 	



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OIL CONDI.	TION			
Visc @ 40°C	cSt	42.4	 	
Acid Number (AN)	mg KOH/g	0.43	 	
VOLVO				

CONTAMINATION NEG Water 10818 Particles >4µm Particles >6µm **1529** Particles > 14µm **85** ISO 4406:1999 (c) 21/18/14 Silicon ppm **10** Sodium ppm **0 || <1** Potassium ppm

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

VOLVO				
WEAD	METALS			
WEAR	AC I WF7			
Iron	ppm	■ 5	 	
Copper	ppm	■ 5	 	
Lead	ppm	1	 	
Tin	ppm	■ <1	 	
Aluminum	ppm	2	 	
Chromium	ppm	2	 	
Molybdenum	ppm	■ 0	 	
Nickel	ppm	■0	 	
Titanium	ppm	0	 	
Silver	ppm	0	 	
Manganese	ppm	0	 	
Vanadium	ppm	0	 	

ADDIT	Zavi			
Calcium	ppm	64	 	
Magnesium	ppm	■ 2	 	
Zinc	ppm	439	 	
Phosphorus	ppm	■327	 	
Barium	ppm	2	 	
Boron	nnm	■<1	 	

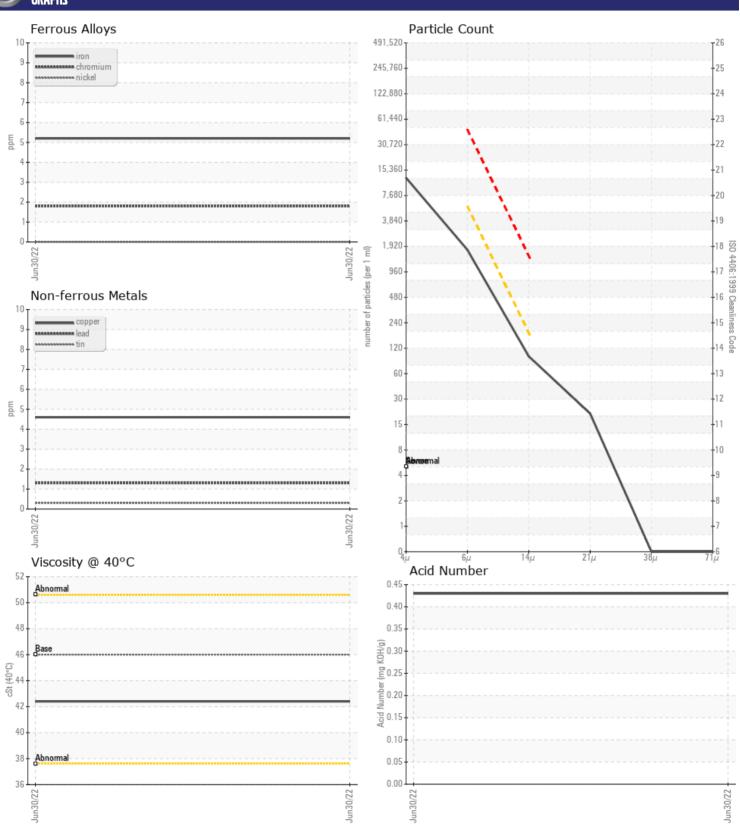
Depot:AJMSTEUnique No:10049580Signed:Don BaldridgeReport Date:15 Jul 2022







GRAPHS





CONSTRUCTION EQUIPMENT VOLVO A45G 352632 - FRONT AXLE



Sample No: VCP373645

Oil Type: GEAR OIL SAE 80W90

Job No:

VOLVO				
CVMDIE	E INFORMATION	ı		
	INFURMATION			
Sample Number		VCP373645	VCP349120	
Sample Date		30 Jun 2022	30 Dec 2021	
Machine Hours		1092	506	
Oil Hours		0	0	
Oil Changed		N/A	Not Changd	
Sample Status		ATTENTION	ATTENTION	
OIL CON	DITION			
Visc @ 40°C	cSt	50.5	51.0	
CONTAN	MINATION			
Water	%	NEG	NEG	
Silicon	ppm	4	4	
Sodium	ppm	2	<u> </u>	
Potassium	ppm	4	<u></u>	
	1.1.	_		
VOLVO	ACT ALC			
WEAR N	NE I ALS			
Iron	ppm	267	■280	
Copper	ppm	2	1	
Lead	ppm	0	0	
Tin	ppm	■<1	- <1	
Aluminum	ppm	■<1	< 1	
Chromium	ppm	4	5	
Molybdenum	ppm	5	7	
Nickel	ppm	■ <1	 <1	
Titanium	ppm	0	0	
Silver	ppm	<1	<1	
Manganese	ppm	16	2 0	
Vanadium	ppm	0	0	
ADDITIV	VES			
Calcium	ppm	125	111	
Magnesium	ppm	2	1	
Zinc	ppm	<u> </u>	□ 50	
Phosphorus	ppm	■ 2580	2413	
Barium	ppm	0	0	
Boron	ppm	247	299	



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Diagnosis

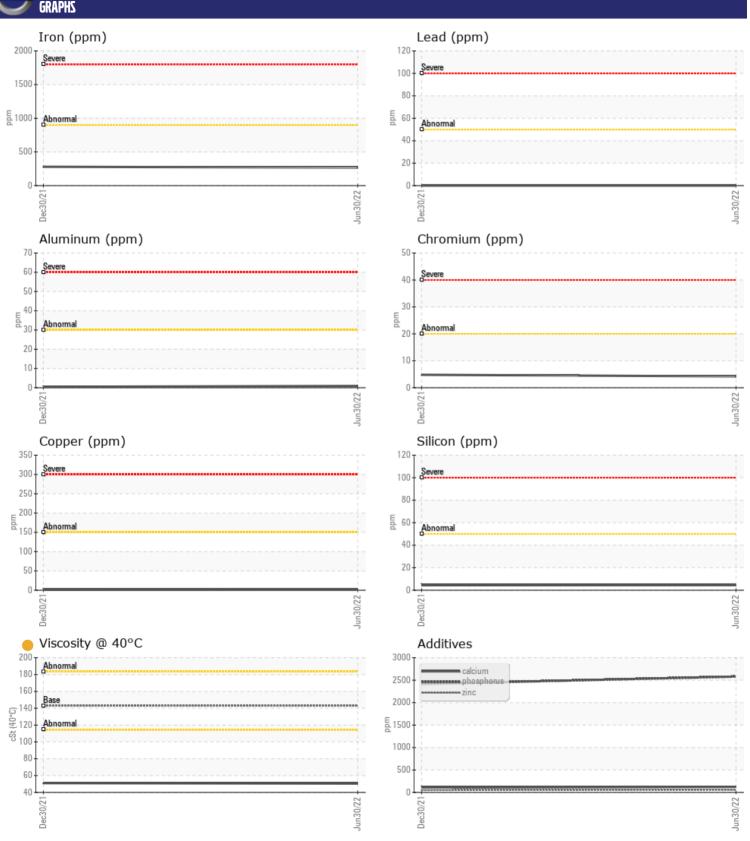
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot:AJMSTEUnique No:10049861Signed:Angela BorellaReport Date:15 Jul 2022











CONSTRUCTION EQUIPMENT VOLVO A45G 352632 - BOGIE/CENTER AXLE



Sample No: VCP345150

Oil Type: GEAR OIL SAE 80W90

Job No:

VOLVO				
CAMDIE	INFORMATION	ı		
	INFURMATION			
Sample Number		VCP345150	VCP349122	
Sample Date		30 Jun 2022	30 Dec 2021	
Machine Hours		1092	506	
Oil Hours		0	0	
Oil Changed		Not Changd	Not Changd	
Sample Status		ATTENTION	ATTENTION	
VOLVO				
OIL CON	DITION			
Visc @ 40°C	cSt	50.9	51.2	
CONTAN	MINATION			
Water	%	NEG	NEG	
Silicon	ppm	14	4	
Sodium	ppm	2	1 2	
Potassium	ppm	4	1 4	
Totassium	ррш			
VOLVO				
WEAR N	METALS			
Iron	ppm	292	■346	
Copper	ppm	1	1	
Lead	ppm	0	0	
Tin	ppm	■<1	- <1	
Aluminum	ppm	■<1	< 1	
Chromium	ppm	■ 5	5	
Molybdenum	ppm	5	6	
Nickel	ppm	1	1	
Titanium	ppm	0	0	
Silver	ppm	0	<1	
Manganese	ppm	1 4	1 7	
Vanadium	ppm	0	<1	
ADDITIV	/ES			
Calcium	ppm	127	1 09	
Magnesium	ppm	<u> </u>	1	
Zinc	ppm	<u> </u>	■50	
Phosphorus	ppm	■2607	2492	
Barium	ppm	0	0	
Boron	ppm	260	3 14	



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Diagnosis

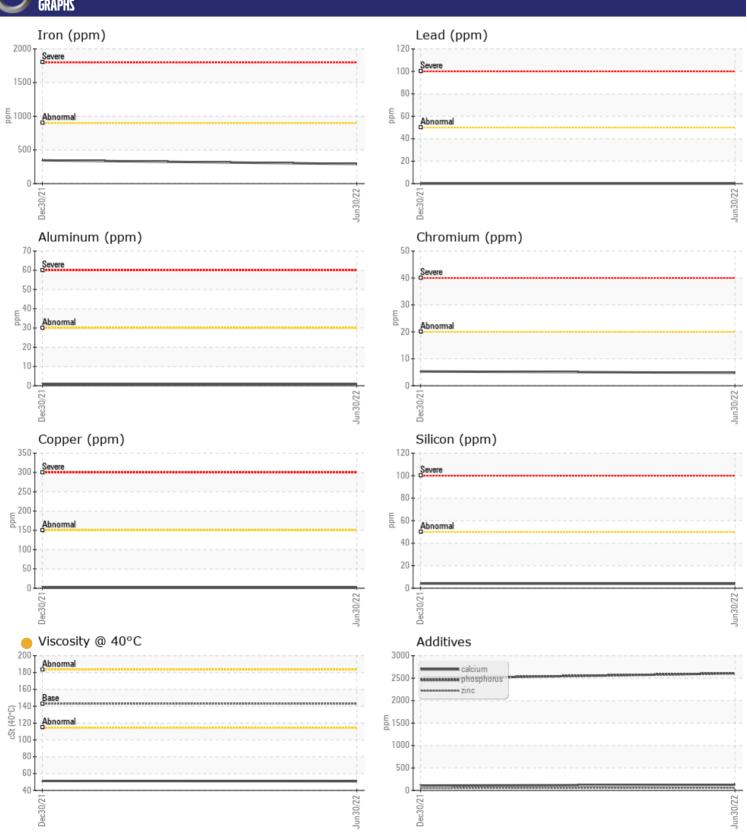
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot:AJMSTEUnique No:10049869Signed:Jonathan HesterReport Date:15 Jul 2022











CONSTRUCTION EQUIPMENT VOLVO A45G 352632 - REAR AXLE



Sample No: VCP374986

Oil Type: GEAR OIL SAE 80W90

Job No:

VOLVO	E INCODMATION			
	E INFORMATION			
Sample Number		VCP374986	VCP349121	
Sample Date		30 Jun 2022	30 Dec 2021	
Machine Hours		1092	506	
Oil Hours		0	0	
Oil Changed		Not Changd	Not Changd	
Sample Status		ATTENTION	ATTENTION	
OIL CON	IDITION			
Visc @ 40°C	cSt	50.7	52.1	
CONTA	MINATION			
_				
Water	%	NEG	NEG	
Silicon	ppm	4	4	
Sodium	ppm	■2	2	
Potassium	ppm	■4	4	
WEAR	METALS			
Iron	ppm	254	■316	
Copper	ppm	2	1	
Lead	ppm	■ <1	0	
Tin	ppm	■ 0	 <1	
Aluminum	ppm	■<1	< 1	
Chromium	ppm	4	6	
Molybdenum	ppm	5	7	
Nickel	ppm	-<1	- <1	
Titanium	ppm	0	0	
Silver	ppm	0	<1	
Manganese	ppm	13	1 7	
Vanadium	ppm	0	<1	
ADDITI	VES			
Calcium	ppm	112	126	
Magnesium	ppm	1	2	
Zinc	ppm	■52	1 60	
Phosphorus	ppm	2581	2484	
Barium	ppm	0	0	
Boron	ppm	259	□313	



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F:

Diagnosis

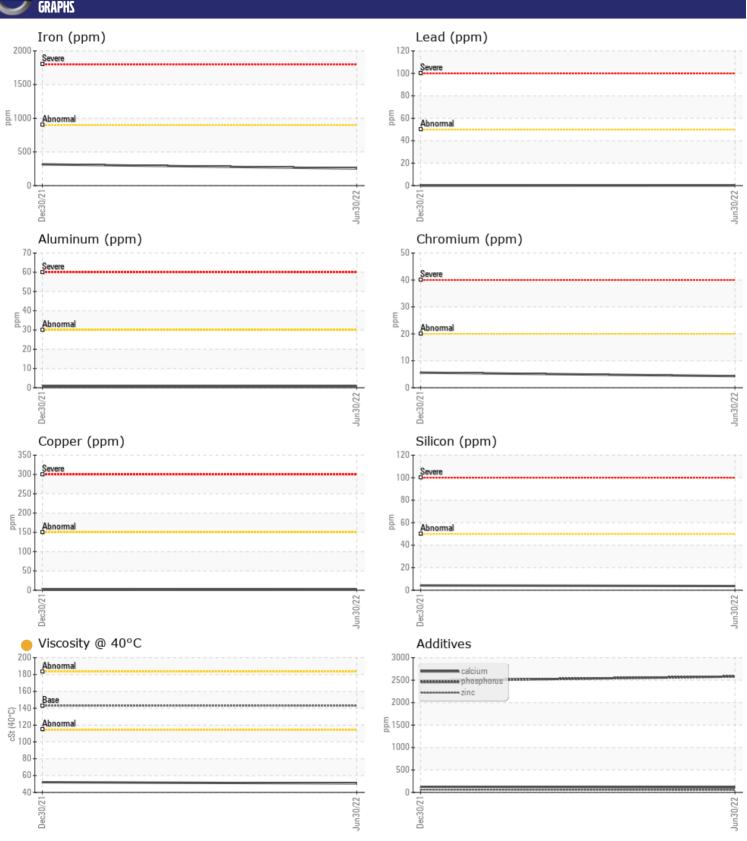
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot:AJMSTEUnique No:10049866Signed:Jonathan HesterReport Date:15 Jul 2022











CONSTRUCTION EQUIPMENT SW0799264 VOLVO A45G 352632 - DROP BOX



Sample No: VCP349116

Oil Type: GEAR OIL SAE 80W90

Job No: SWO799264

SAMPLE	INFORMATION			
Sample Number		VCP349116	 	
Sample Date		30 Dec 2021	 	
Machine Hours		506	 	
Oil Hours		0	 	
Oil Changed		Not Changd	 	
Sample Status		ATTENTION	 	
OIL CON	DITION			
Visc @ 40°C	cSt	48.2	 	
VOLVO		_		
CUNTAL	MINATION			
_				
Water	%	NEG	 	
Silicon	ppm	18	 	
Sodium	ppm	9	 	
Potassium	ppm	■ 1	 	
VOLVO				
WEAR N	TETALS			
Iron	ppm	103	 	
Copper	ppm	4	 	
Lead	ppm	0	 	
Tin	ppm		 	
Aluminum	ppm	■<1	 	
Chromium	ppm	2	 	
Molybdenum	ppm	22	 	
Nickel	ppm	■<1	 	
Titanium	ppm	0	 	
Silver	ppm	<1	 	
Manganese	ppm	2	 	
Vanadium	ppm	0	 	
VOLVO				
ADDITIV	IES			
Calcium	ppm	66	 	
Magnesium	ppm	7	 	
Zinc	ppm	■85	 	
Phosphorus	ppm	2312	 	
Barium	ppm	0	 	
Boron	ppm	216	 	



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Contact: SERVICE MANAGER

T: (815)631-1606 F:

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot:AJMSTEUnique No:9811893Signed:Jonathan HesterReport Date:14 Jan 2022







