

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [[TRI-CON]] LIEBHERR L586 052702-1334 - Diesel Engine

Sample No: LHMC133793

Oil Type: MOBIL DELVAC 1300 SUPER 10W30



#### SAMPLE INFORMATION

Sample Number	LHMC133793	LHMC133867	---	---
Sample Date	30 Oct 2023	08 Dec 2022	---	---
Machine Hours	6241	5216	---	---
Oil Hours	500	843	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

**TRI-CON MATERIALS INC**  
 13559 PRAIRIE IND PKWY  
 HENNEPIN, IL  
 US 61327  
 Contact: TIM FRAZIER



#### OIL CONDITION

Visc @ 100°C	cSt	11.6	11.1	---	---
Base Number (BN)	mg KOH/g	7.0	10.2	---	---
Oxidation (PA)	%	58	83	---	---

T: (815)303-5555  
 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.



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.1	0.2	---	---
Nitration (PA)	%	77	80	---	---
Sulfation (PA)	%	53	61	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	1.3	---	---
Silicon	ppm	7	8	---	---
Sodium	ppm	3	3	---	---
Potassium	ppm	5	3	---	---



#### WEAR METALS

Iron	ppm	2	6	---	---
Copper	ppm	<1	2	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	1	3	---	---
Chromium	ppm	0	<1	---	---
Molybdenum	ppm	3	37	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	<1	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---



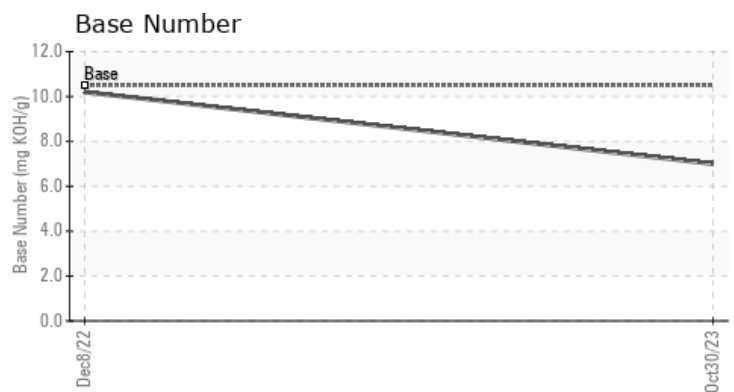
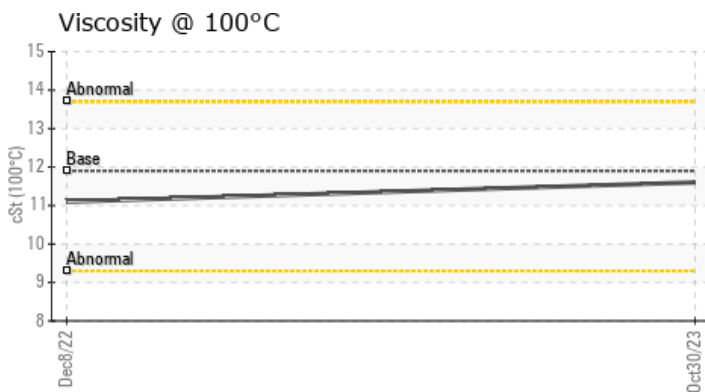
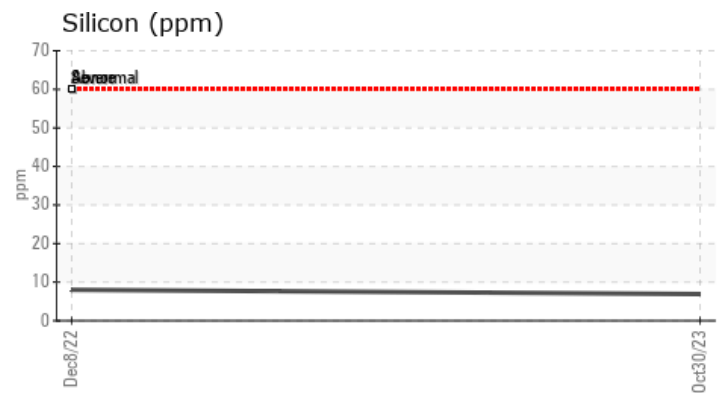
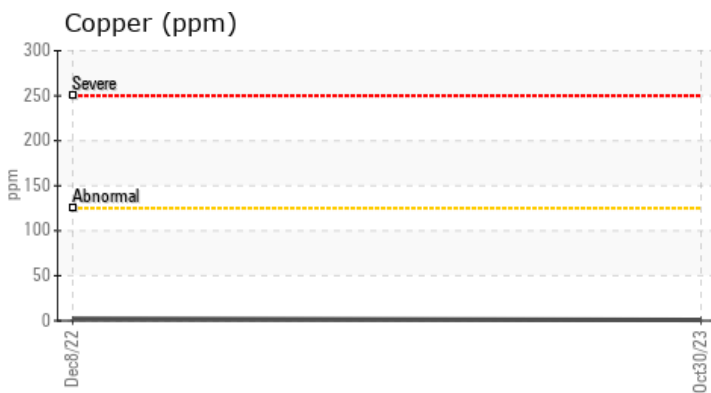
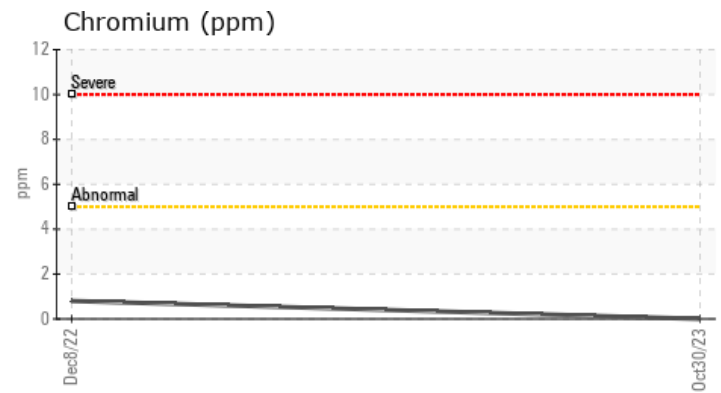
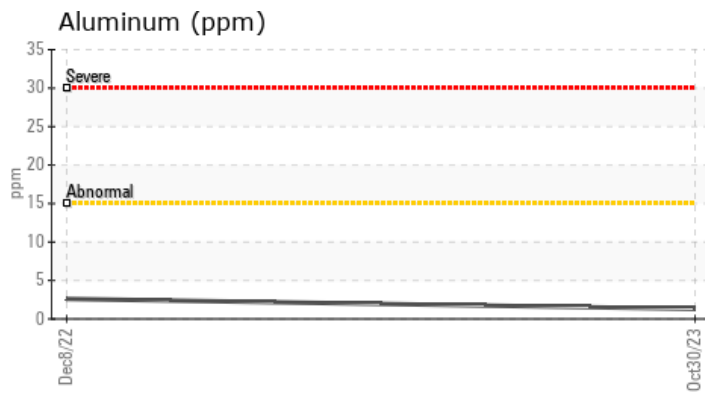
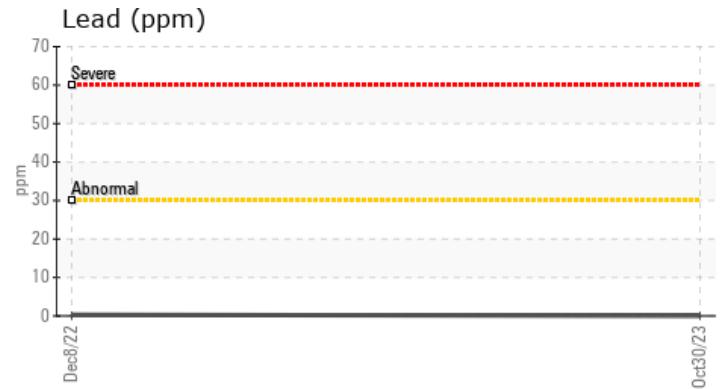
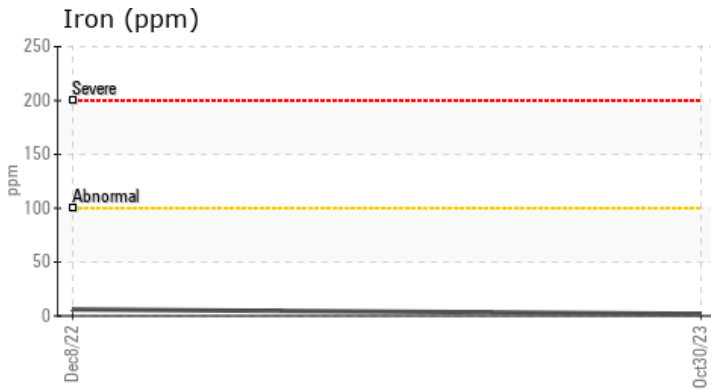
#### ADDITIVES

Calcium	ppm	1238	1953	---	---
Magnesium	ppm	647	439	---	---
Zinc	ppm	780	918	---	---
Phosphorus	ppm	751	772	---	---
Barium	ppm	0	<1	---	---
Boron	ppm	49	62	---	---

**Depot:** TRIHENLH  
**Unique No:** 10756290  
**Signed:** Wes Davis  
**Report Date:** 28 Nov 2023



### GRAPHS



# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L586 052702-1334 - Transmission (Manual)

Sample No: LHMC133782

Oil Type: LIEBHERR GEAR MF 80W



#### SAMPLE INFORMATION

Sample Number	LHMC133782	LHMC102998	---	---
Sample Date	30 Oct 2023	08 Dec 2022	---	---
Machine Hours	6241	5216	---	---
Oil Hours	1000	843	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

**TRI-CON MATERIALS INC**  
 13559 PRAIRIE IND PKWY  
 HENNEPIN, IL  
 US 61327  
 Contact: TIM FRAZIER



#### OIL CONDITION

Visc @ 40°C	cSt	49.0	45.9	---	---
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T: (815)303-5555  
 F:



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	5	7	---	---
Sodium	ppm	0	4	---	---
Potassium	ppm	3	0	---	---

#### Diagnosis

Resample at the next service interval to monitor. 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.



#### WEAR METALS

Iron	ppm	10	29	---	---
Copper	ppm	1	2	---	---
Lead	ppm	<1	<1	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	2	1	---	---
Chromium	ppm	0	<1	---	---
Molybdenum	ppm	2	<1	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	<1	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



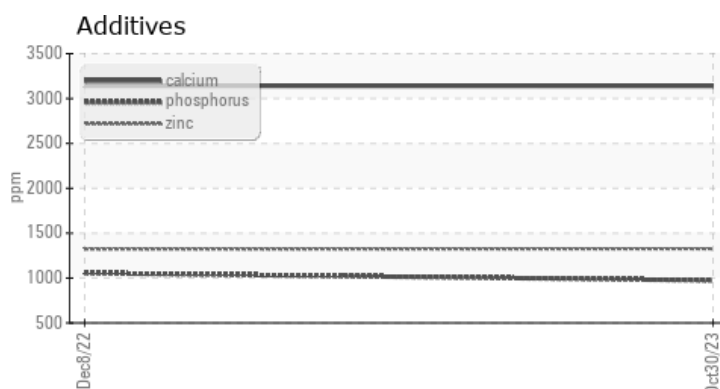
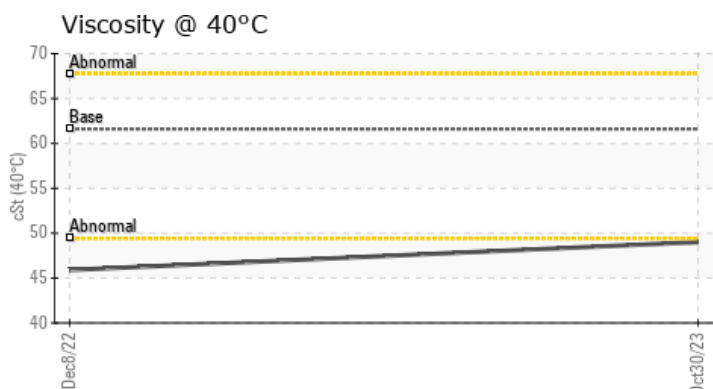
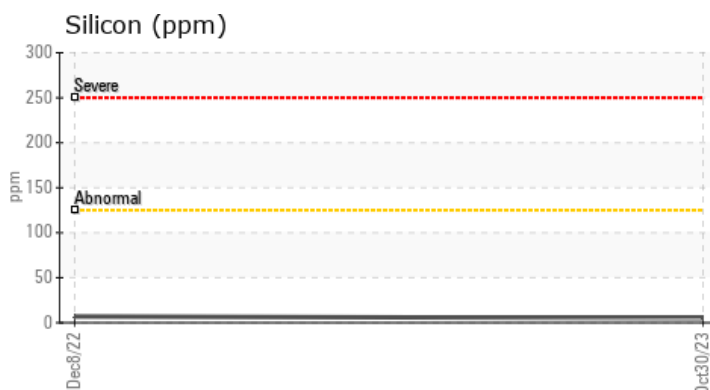
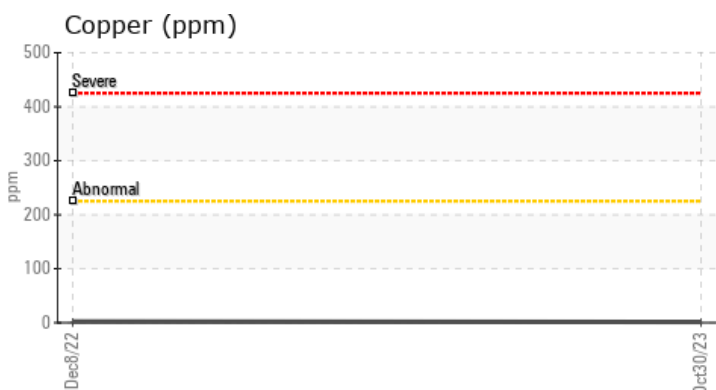
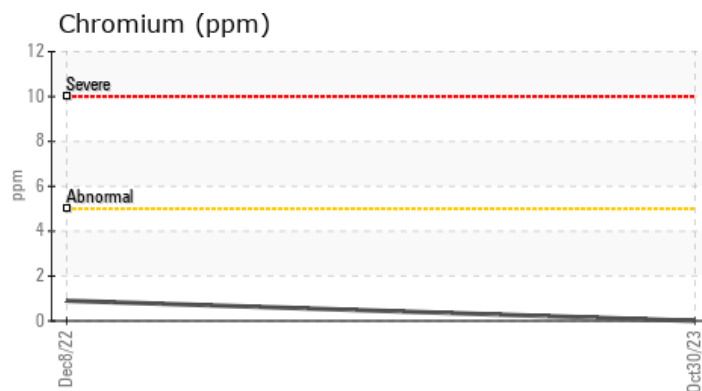
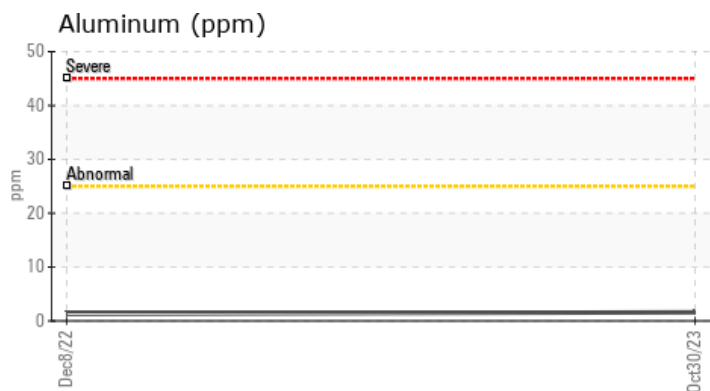
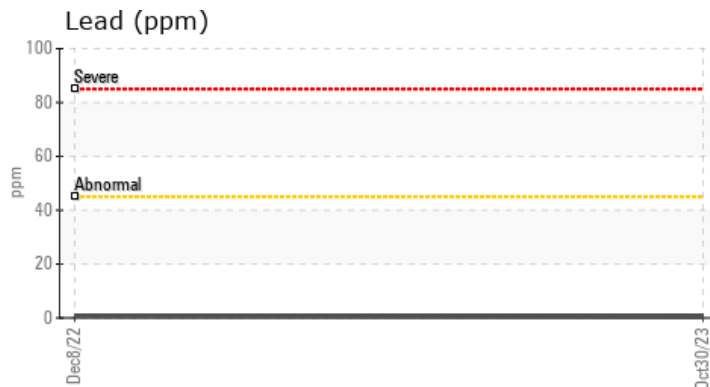
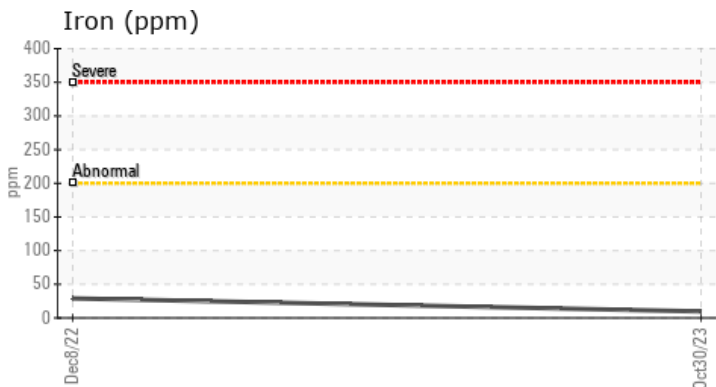
#### ADDITIVES

Calcium	ppm	3140	3141	---	---
Magnesium	ppm	5	8	---	---
Zinc	ppm	1326	1322	---	---
Phosphorus	ppm	973	1055	---	---
Barium	ppm	0	0	---	---
Boron	ppm	26	59	---	---

**Depot:** TRIHENLH  
**Unique No:** 10764564  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2023



### GRAPHS



# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L586 052702-1334 - Front Differential

Sample No: LHMC133784

Oil Type: LIEBHERR GEAR BASIC 90 LS



#### SAMPLE INFORMATION

Sample Number	LHMC133784	LHMC133811	LHMC132363	---
Sample Date	30 Oct 2023	09 Oct 2023	08 Dec 2022	---
Machine Hours	6241	6100	5216	---
Oil Hours	1000	200	843	---
Oil Changed	Changed	Not Changd	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

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 13559 PRAIRIE IND PKWY  
 HENNEPIN, IL  
 US 61327  
 Contact: TIM FRAZIER



#### OIL CONDITION

Visc @ 40°C	cSt	143	148	151	---
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T: (815)303-5555  
 F:



#### CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	6	5	6	---
Sodium	ppm	0	<1	2	---
Potassium	ppm	1	0	0	---

#### 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.



#### WEAR METALS

Iron	ppm	188	154	167	---
Copper	ppm	27	30	25	---
Lead	ppm	0	0	<1	---
Tin	ppm	2	1	2	---
Aluminum	ppm	<1	0	<1	---
Chromium	ppm	2	1	2	---
Molybdenum	ppm	0	0	<1	---
Nickel	ppm	<1	0	<1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	7	6	12	---
Vanadium	ppm	<1	0	0	---



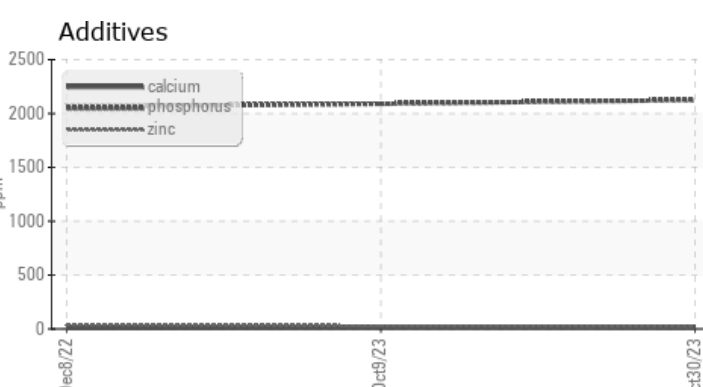
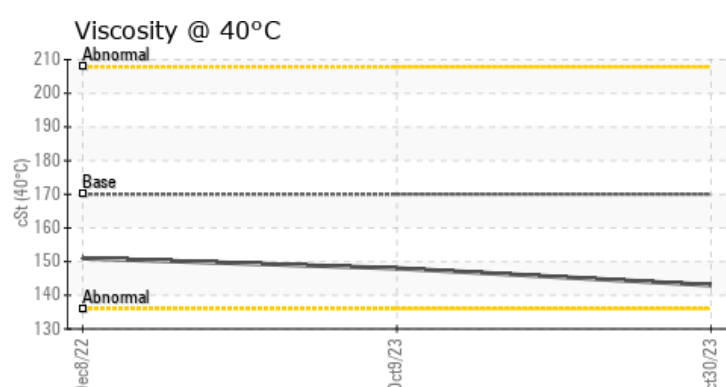
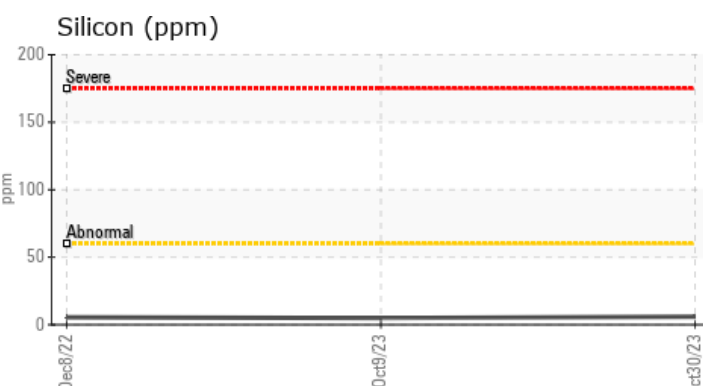
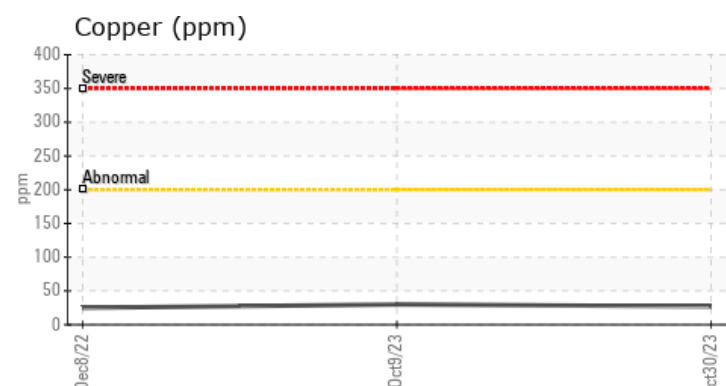
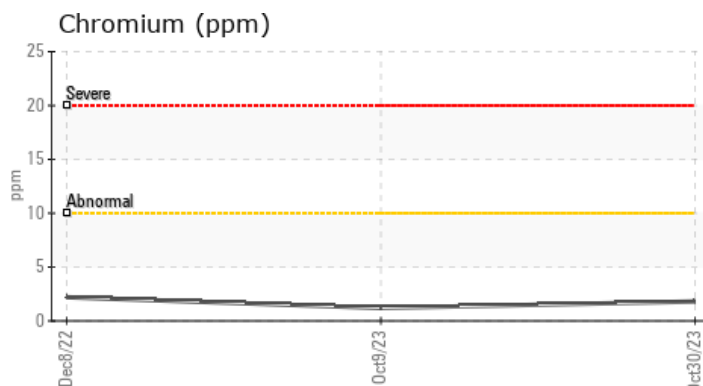
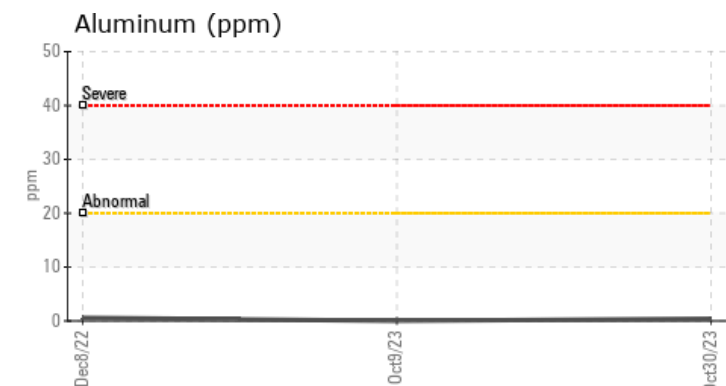
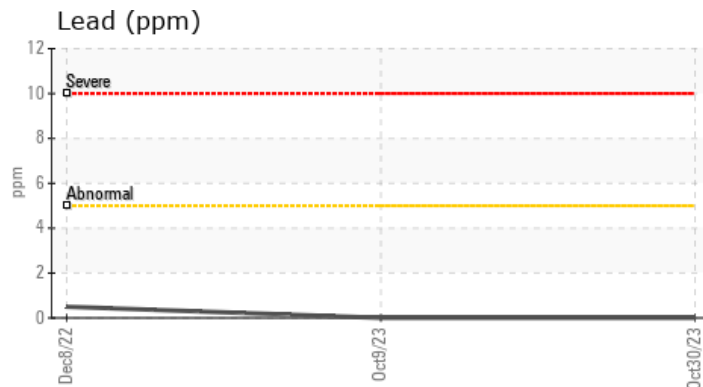
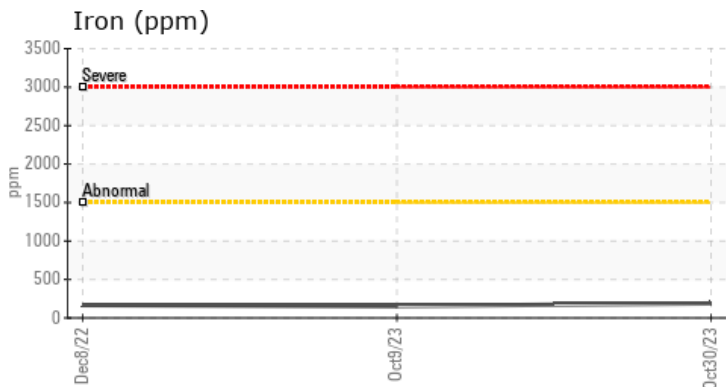
#### ADDITIVES

Calcium	ppm	12	15	10	---
Magnesium	ppm	5	1	3	---
Zinc	ppm	18	27	36	---
Phosphorus	ppm	2125	2090	2064	---
Barium	ppm	0	0	0	---
Boron	ppm	140	111	125	---

Depot: TRIHENLH  
 Unique No: 10763666  
 Signed: Don Baldrige  
 Report Date: 30 Nov 2023



### GRAPHS



# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L586 052702-1334 - Splitter Box

Sample No: LHMC133794

Oil Type: MOBIL MOBILUBE HD LS 80W90



#### SAMPLE INFORMATION

Sample Number	LHMC133794	LHMC116537	---	---
Sample Date	30 Oct 2023	18 Oct 2022	---	---
Machine Hours	6241	5200	---	---
Oil Hours	1000	827	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

**TRI-CON MATERIALS INC**  
 13559 PRAIRIE IND PKWY  
 HENNEPIN, IL  
 US 61327  
 Contact: TIM FRAZIER



#### OIL CONDITION

Visc @ 40°C	cSt	● 165	● 148	---	---
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T: (815)303-5555  
 F:



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	● 7	● 5	---	---
Sodium	ppm	● <1	● 2	---	---
Potassium	ppm	● 6	● 3	---	---

#### 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.



#### WEAR METALS

Iron	ppm	● 215	● 169	---	---
Copper	ppm	● <1	● <1	---	---
Lead	ppm	● <1	● 0	---	---
Tin	ppm	● <1	● 0	---	---
Aluminum	ppm	● 2	● 2	---	---
Chromium	ppm	● 3	● 1	---	---
Molybdenum	ppm	● 1	● 1	---	---
Nickel	ppm	● 6	● 3	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	● 3	● 2	---	---
Vanadium	ppm	0	0	---	---



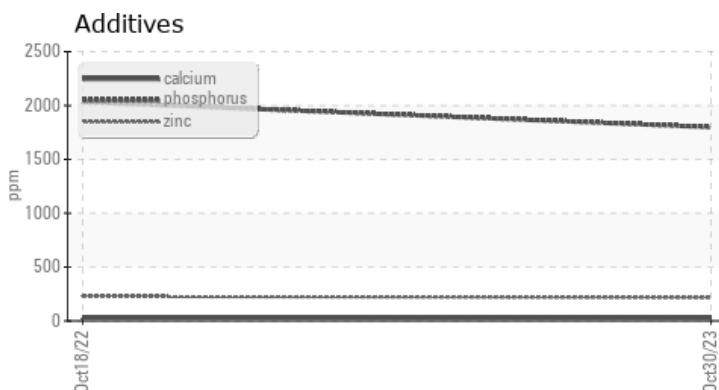
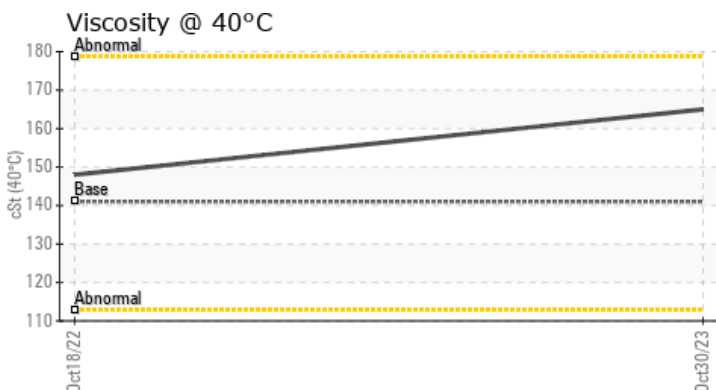
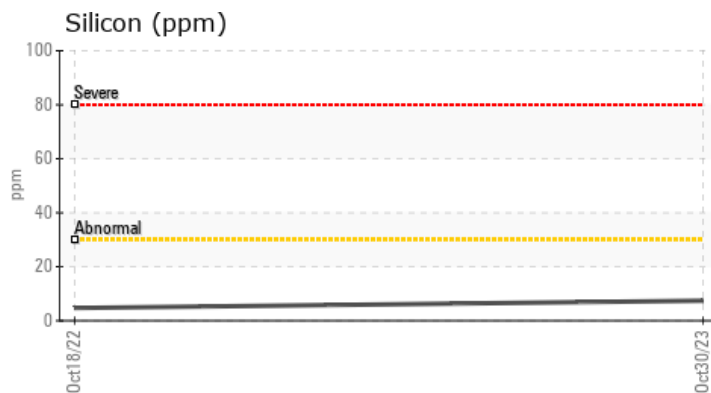
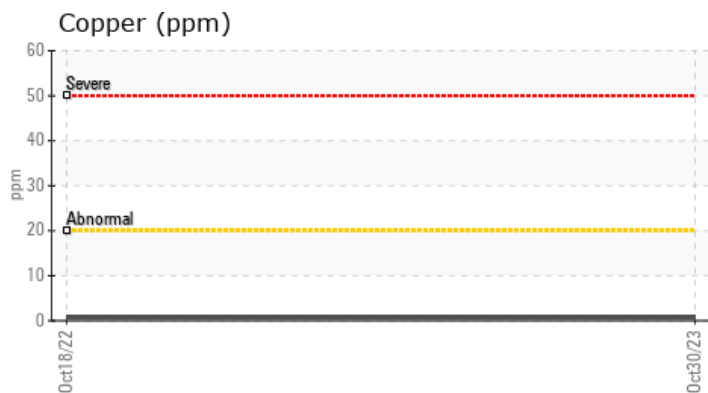
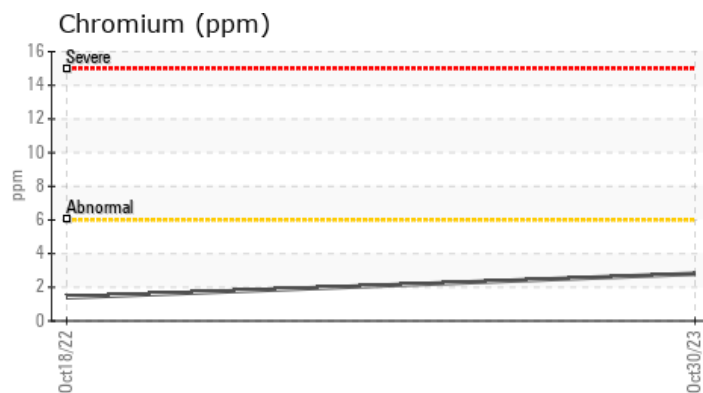
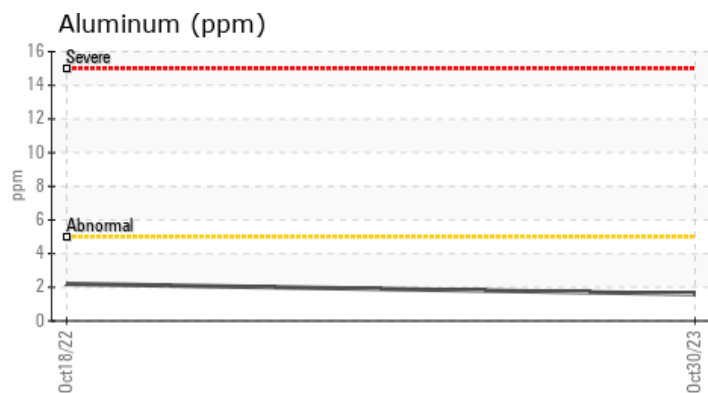
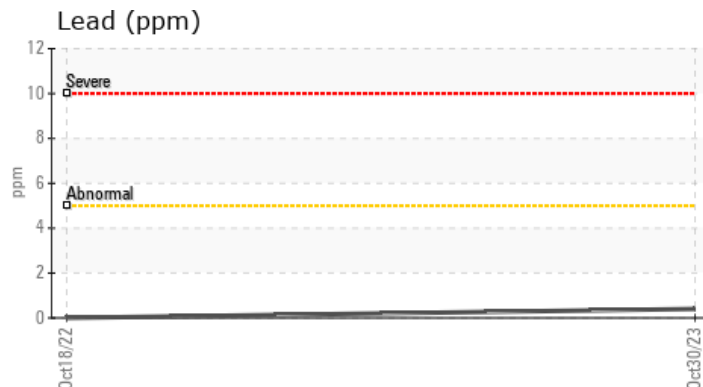
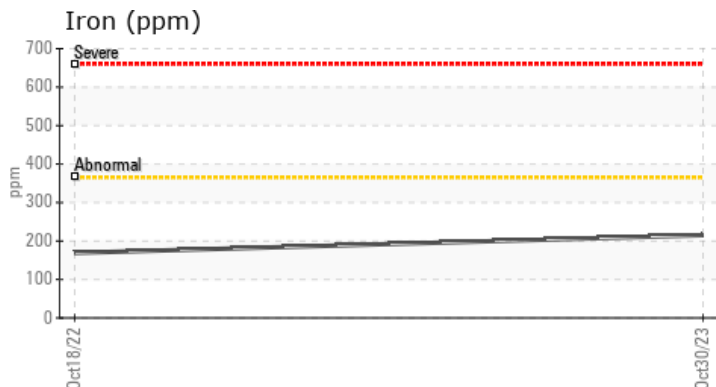
#### ADDITIVES

Calcium	ppm	● 29	● 32	---	---
Magnesium	ppm	● 8	● 4	---	---
Zinc	ppm	● 215	● 227	---	---
Phosphorus	ppm	● 1799	● 2032	---	---
Barium	ppm	● 0	● 0	---	---
Boron	ppm	● 26	● 113	---	---

**Depot:** TRIHENLH  
**Unique No:** 10764548  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2023



### GRAPHS





# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR L586 052702-1334 - Rear Differential

Sample No: LHMC133773

Oil Type: MOBIL MOBILUBE HD LS 80W90



#### SAMPLE INFORMATION

Sample Number	LHMC133773	LHMC104206	---	---
Sample Date	30 Oct 2023	08 Dec 2022	---	---
Machine Hours	6241	5216	---	---
Oil Hours	1000	843	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

**TRI-CON MATERIALS INC**  
 13559 PRAIRIE IND PKWY  
 HENNEPIN, IL  
 US 61327  
 Contact: TIM FRAZIER



#### OIL CONDITION

Visc @ 40°C	cSt	● 141	● 151	---	---
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T: (815)303-5555  
 F:



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	● 5	● 5	---	---
Sodium	ppm	● 0	● 3	---	---
Potassium	ppm	● 1	● 0	---	---

#### 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.



#### WEAR METALS

Iron	ppm	● 123	● 120	---	---
Copper	ppm	● 24	● 24	---	---
Lead	ppm	● 0	● <1	---	---
Tin	ppm	● 2	● 1	---	---
Aluminum	ppm	● <1	● 1	---	---
Chromium	ppm	● 1	● 2	---	---
Molybdenum	ppm	● 0	● <1	---	---
Nickel	ppm	● <1	● <1	---	---
Titanium	ppm	● 0	● 0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	● 7	● 13	---	---
Vanadium	ppm	0	0	---	---



#### ADDITIVES

Calcium	ppm	● 33	25	---	---
Magnesium	ppm	● 5	● 9	---	---
Zinc	ppm	● 28	● 53	---	---
Phosphorus	ppm	● 2059	● 2066	---	---
Barium	ppm	● 0	● 0	---	---
Boron	ppm	● 118	● 122	---	---

**Depot:** TRIHENLH  
**Unique No:** 10763665  
**Signed:** Don Baldrige  
**Report Date:** 30 Nov 2023



### GRAPHS

