



ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-53277-0242  
SHOP JOB NUM : wgi2309  
SAMPLE SHIP TIME (days) : 4  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: NICHOLSON  
RECEIVED DATE: 04-Oct-23

CAT 323  
 **No Action Required**  
OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 09-Oct-23

SAMPLE INFORMATION				
Sampled Date	30-Sep-23	22-May-23	11-Apr-23	01-Dec-22
Sample Id	T010-53277-0242	T010-53146-0211	T010-53107-0238	T010-52336-0245
Lab Date	04-Oct-23	26-May-23	17-Apr-23	02-Dec-22
Meter [Hr]	1286	1002	0	500
Comp Meter [Hr]	1286			
Meter On Fluid	284	1002	0	500
Fluid Brand	CAT	CAT	CAT	FACTORYFIL
Fluid Weight				15W-40
Fluid Type				DEO ULS
Fluid Change	U	Y	U	Y
Filter Change	U	Y	U	Y
Total Fluid Added	0	0	0	0

PREVIOUS SAMPLE					
OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT THE
RECOMMENDED INTERVAL.					

For additional sample history, go to: [my.cat.com](https://my.cat.com)

CONDITION / CONTAMINATION					
		30-Sep-23	22-May-23	11-Apr-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.75	12.25	12.38	11.36
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	92.13	87.28	88.41	76.19

VISCOSITY INDEX					
VI	Viscosity Index	136	134	136	141

WEAR LEVELS / ADDITIVES					
		30-Sep-23	22-May-23	11-Apr-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	2	3	3	12
Fe	Iron	10	16	12	29
Cr	Chromium	1	1	0	1
Al	Aluminum	4	8	8	34
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	4	4	4	7
Na	Sodium	2	3	2	4
K	Potassium	0	2	0	3
Mo	Molybdenum	36	40	38	37
Ni	Nickel	0	0	1	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	1	1	1	2
Cd	Cadmium	0	0	0	0
Ca	Calcium	1502	1669	1481	1527
P	Phosphorus	806	909	843	837
Zn	Zinc	1026	1110	983	1013
Mg	Magnesium	450	464	415	440
Ba	Barium	0	0	0	0
B	Boron	45	35	43	39

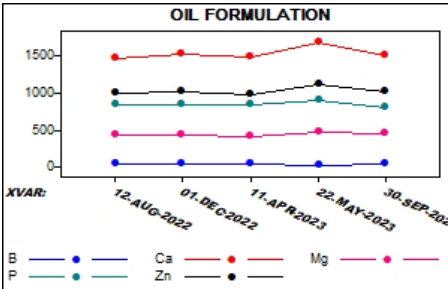
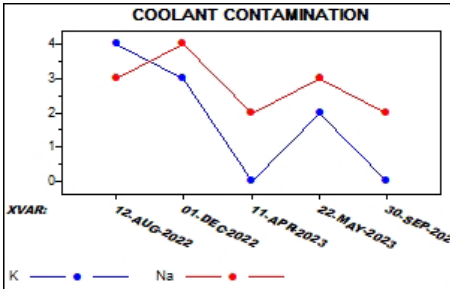
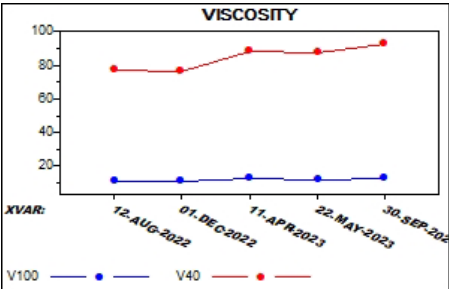
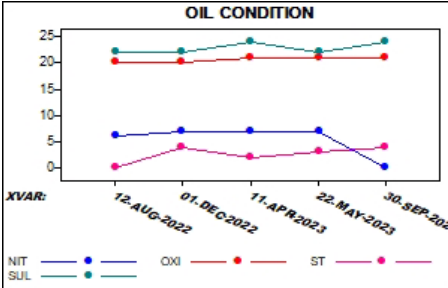
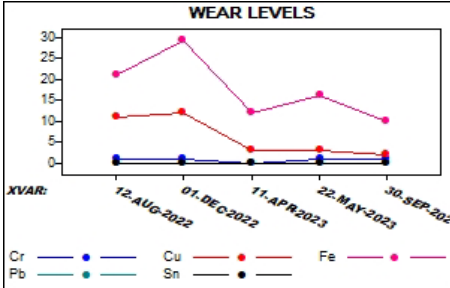
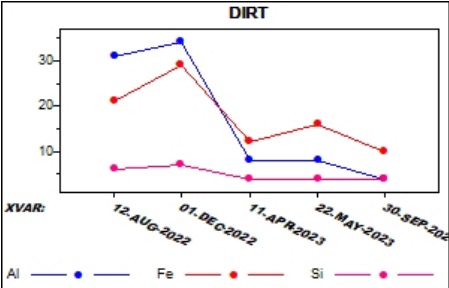
INFRARED (UFM) ASTM E2412					
ST	Soot	4	3	2	4
OXI	Oxidation	21	21	21	20
SUL	Sulfur Products	24	22	24	22
NIT	Nitration	0	7	7	7

WATER - HOTPLATE					
W	Water	N	N	N	N

FUEL DILUTION (SCREEN)					
F	Fuel	N	N	N	N

FUEL DILUTION (%) ASTM D7593					
PFc	Percent Fuel	2.53	<2	<2	3.03

CLEANLINESS					
		30-Sep-23	22-May-23	11-Apr-23	01-Dec-22
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJIVrs>

## SWING DRIVE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54060-0444

LABEL#: 4

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 01-Mar-24

## SAMPLE INFORMATION

	25-Feb-24	22-May-23	01-Dec-22
Sample Date	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54060-0444	T010-53146-0419	T010-52336-0321
Lab Date	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1443.0	1002	500
Comp Meter [Hr]	1443.0		
Meter On Fluid	441.0	1002	500
Fluid Brand	CAT		CAT
Fluid Weight	50		
Fluid Type	TDTO		FACTORY FILL
Fluid Change	N	Y	U
Filter Change	N	N	NA
Make Up Fluid [MJ]	500.0		
Total Fluid Added	500.0	0	0

## WEAR LEVELS / ADDITIVES

		25-Feb-24	22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	0	0	0
Fe	Iron	10	71	59
Cr	Chromium	0	1	1
Al	Aluminum	1	1	1
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	3	7	6
Na	Sodium	2	4	3
K	Potassium	0	1	0
Mo	Molybdenum	0	0	0
Ni	Nickel	0	0	0
Ag	Silver	0	0	0
Ti	Titanium	0	0	0
V	Vanadium	0	0	0
Mn	Manganese	0	1	1
Cd	Cadmium	0	0	0
Ca	Calcium	2558	3176	3022
P	Phosphorus	811	1061	994
Zn	Zinc	1077	1318	1247
Mg	Magnesium	8	16	15
Ba	Barium	1	17	15
B	Boron	1	1	1

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		25-Feb-24	22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445				
V40	Viscosity at 40 C	185.7	93.50	93.90

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	4	3	3
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## WATER - HOTPLATE

W	Water	N	N	N
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## CLEANLINESS

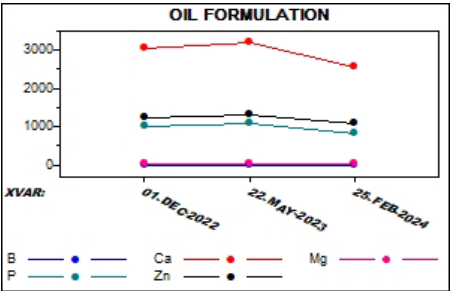
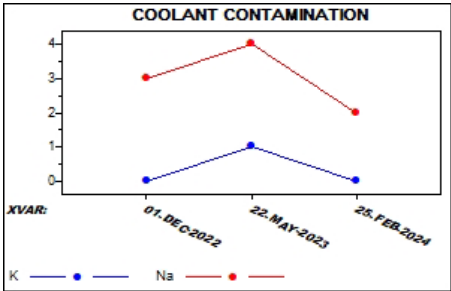
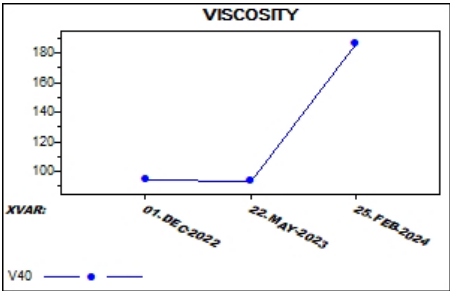
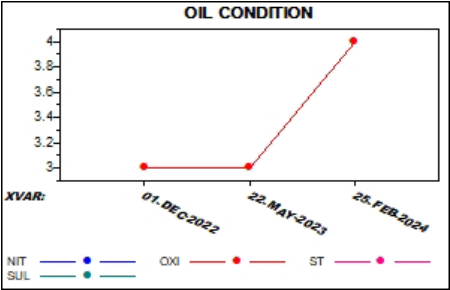
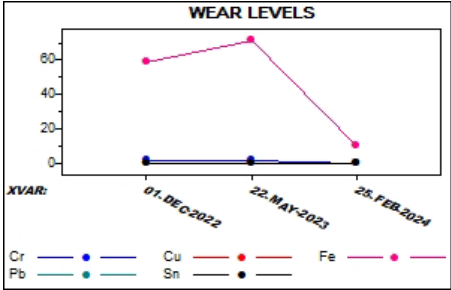
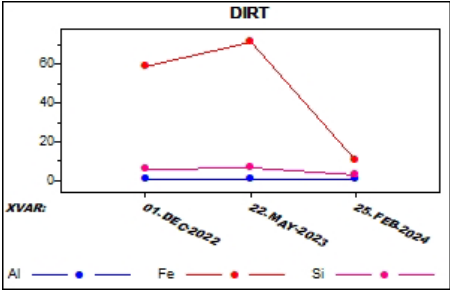
		25-Feb-24	22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406				
ISO	ISO Code Rating	19/15	20/15	22/15
6μ	6μ	3140	9711	28548
14μ	14μ	192	226	205

## FERROUS DEBRIS

PQI	PQ Index	0	16	15
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## VISUAL INSPECTION

DEP	DEP	N	B1	N
DEP2	DEP2	N	DEB	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 01-Mar-24

T010-54060-0602

LABEL#: 1

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

## SAMPLE INFORMATION

	25-Feb-24	30-Sep-23	22-May-23	11-Apr-23
Sample Date	25-Feb-24	30-Sep-23	22-May-23	11-Apr-23
Sample Id	T010-54060-0602	T010-53277-0242	T010-53146-0211	T010-53107-0238
Lab Date	29-Feb-24	04-Oct-23	26-May-23	17-Apr-23
Meter [Hr]	1443.0	1286	1002	0
Comp Meter [Hr]	1443.0	1286		
Meter On Fluid	441.0	284	1002	0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40			
Fluid Type	DEO-ULS(CK-4)			
Fluid Change	Y	U	Y	U
Filter Change	Y	U	Y	U
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT THE
					RECOMMENDED INTERVAL.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		25-Feb-24	30-Sep-23	22-May-23	11-Apr-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V100	Viscosity at 100 C	12.86	12.75	12.25	12.38

<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V40	Viscosity at 40 C	92.50	92.13	87.28	88.41

<b>VISCOSITY INDEX</b>					
VI	Viscosity Index	137	136	134	136

<b>INFRARED (UFM) ASTM E2412</b>					
ST	Soot	6	4	3	2
OXI	Oxidation	21	21	21	21
SUL	Sulfur Products	24	24	22	24
NIT	Nitration	0	0	7	7

<b>WATER - HOTPLATE</b>					
W	Water	N	N	N	N

<b>FUEL DILUTION (SCREEN)</b>					
F	Fuel	N	N	N	N

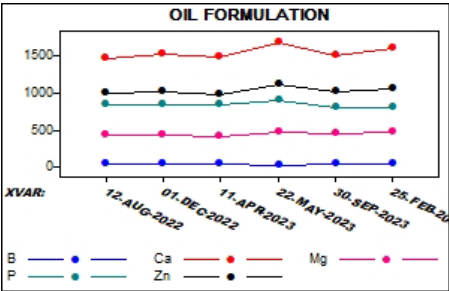
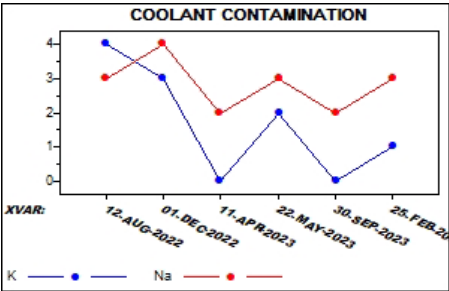
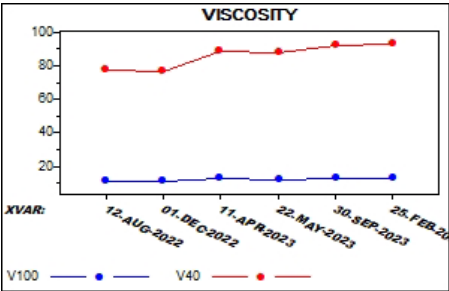
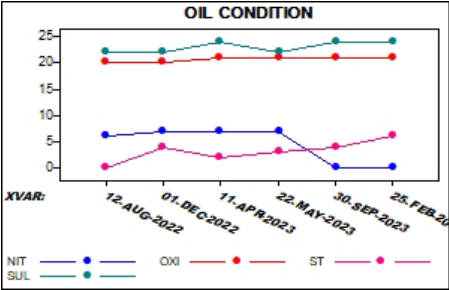
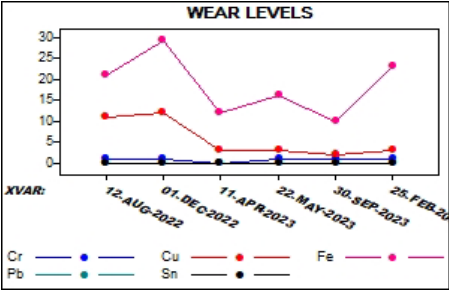
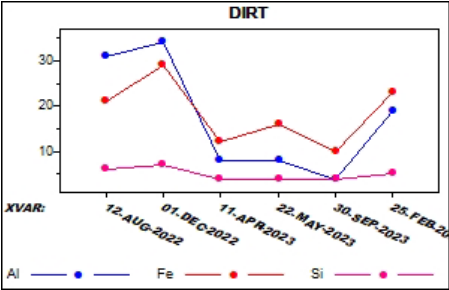
<b>FUEL DILUTION (%) ASTM D7593</b>					
PFc	Percent Fuel	<2	2.53	<2	<2

## CLEANLINESS

		25-Feb-24	30-Sep-23	22-May-23	11-Apr-23
<b>FERROUS DEBRIS</b>					
PQI	PQ Index	0	0	0	0

## WEAR LEVELS / ADDITIVES

		25-Feb-24	30-Sep-23	22-May-23	11-Apr-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>					
Cu	Copper	3	2	3	3
Fe	Iron	23	10	16	12
Cr	Chromium	1	1	1	0
Al	Aluminum	19	4	8	8
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	5	4	4	4
Na	Sodium	3	2	3	2
K	Potassium	1	0	2	0
Mo	Molybdenum	38	36	40	38
Ni	Nickel	0	0	0	1
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	1	1	1	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1595	1502	1669	1481
P	Phosphorus	809	806	909	843
Zn	Zinc	1065	1026	1110	983
Mg	Magnesium	471	450	464	415
Ba	Barium	0	0	0	0
B	Boron	39	45	35	43



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>



RADIATOR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



Monitor Compartment

Interp By: Tom Cokalis  
Interpreted On: 05-Mar-24

T010-54060-2004

LABEL#: 5

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

LIGHT AMOUNT OF BLACK NON-MAGNETIC PARTICLES PRESENT. ZINC LEVELS ARE SLIGHTLY ELEVATED. NITRITE  
LEVELS ARE LOW. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. WE WILL CONTINUE TO MONITOR  
COOLANT CONDITION. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT  
CONDITION.

SAMPLE INFORMATION



Sampled Date	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54060-2004	T010-53146-2018	T010-52336-2028
Lab Date	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1443.0	1002	474
Comp Meter [Hr]	1443.0		
Meter On Fluid	1443.0	1002	474
Fluid Brand	CAT		
Fluid Weight			
Fluid Type	ELC ADVANCED		
Fluid Change	N	N	U
Filter Change	N	N	U
Total Fluid Added	0	0	0

PREVIOUS SAMPLE

COOLANT CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

For additional sample history, go to: [S.O.S WEB](#)

ADDITIONAL CHARACTERISTICS

		25-Feb-24	22-May-23	01-Dec-22
ION CHROMATOGRAPHY (PPM) ASTM D4327				
CL	Chloride	10	9	6
SO4	Sulfate	148	123	58

ADDITIONAL ANALYTES

TH	Total Hardness	6	4	2
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REFRACTIVE INDEX

GL	Glycol (%)	50	50	49
FP	Freeze Point (°C)	-37	-37	-36
BP	Boil Point (°C)	107	107	107

pH

pH	pH	7.8	8.2	8.9
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CONDUCTIVITY (µS/cm)

CON	Conductivity	3744	3608	3644
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PHYSICAL CHARACTERISTICS

		25-Feb-24	22-May-23	01-Dec-22
PHYSICALS				
Color	Color	red/light	red/light	orange
App	Appearance	clear	clear	clear
Odor	Odor	ammonia	ammonia	norm
Oil	Oil	none	none	none
Foam	Foam	norm	norm	norm
PAmt	Precip Amount	light	trace	trace
PApp	Precip Appearance	granular	granular	granular
PCol	Precip Color	blk sol	brn/blk sol	brn/blk sol
PProp	Precip Property	non-mag	non-mag	non-mag

CORROSION LEVELS/ CHEMISTRY

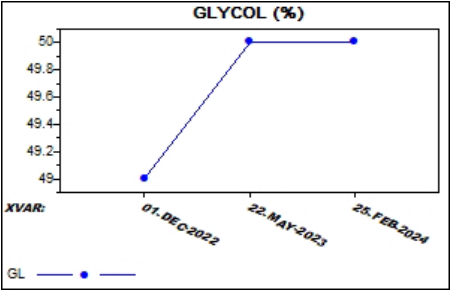
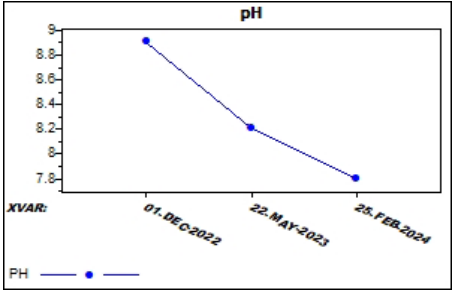
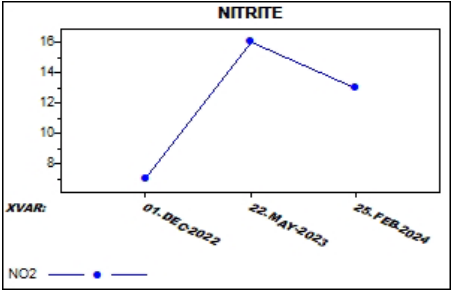
		25-Feb-24	22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	1	1	0
Fe	Iron	0	0	0
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Al	Aluminum	0	1	0
Zn	Zinc	6	2	0
Na	Sodium	3351	3318	3435
K	Potassium	70	184	68
Mo	Molybdenum	511	542	516

ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	13	16	7
NO3	Nitrate	43	52	21
GLO	Glycolate	872	594	428

ADDITIONAL ANALYTES

MoO4	Molybdate	852	903	861
BO3	Borate	1	0	19
SiO3	Silicate	22	23	19



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>



## HYDRAULIC SYSTEM

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54060-0407

LABEL#: 3

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 01-Mar-24

## SAMPLE INFORMATION

	25-Feb-24	22-May-23	01-Dec-22
Sample Date	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54060-0407	T010-53146-0310	T010-52336-0306
Lab Date	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1443.0	1002	500
Comp Meter [Hr]	1443.0		
Meter On Fluid	1443.0	1002	500
Fluid Brand	CAT		CAT
Fluid Weight	10W		
Fluid Type	HYDO ADVANCED		FACTORY FILL
Fluid Change	N	N	U
Filter Change	N	N	N
Total Fluid Added	0	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		25-Feb-24	22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40	Viscosity at 40 C	42.84	42.80	42.69

## INFRARED (UFM) ASTM E2412

		25-Feb-24	22-May-23	01-Dec-22
OXI	Oxidation	4	4	4

## WATER - HOTPLATE

		25-Feb-24	22-May-23	01-Dec-22
W	Water	N	N	N

## WEAR LEVELS / ADDITIVES

		25-Feb-24	22-May-23	01-Dec-22
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>				
Cu	Copper	8	8	7
Fe	Iron	11	9	7
Cr	Chromium	0	0	0
Al	Aluminum	1	0	0
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	1	1	0
Na	Sodium	3	3	3
K	Potassium	1	1	1
Mo	Molybdenum	0	0	0
Ni	Nickel	0	1	0
Ag	Silver	0	0	0
Ti	Titanium	0	0	0
V	Vanadium	0	0	0
Mn	Manganese	0	0	0
Cd	Cadmium	0	0	0
Ca	Calcium	156	162	162
P	Phosphorus	577	669	629
Zn	Zinc	817	826	827
Mg	Magnesium	1	1	1
Ba	Barium	1	1	1
B	Boron	1	1	1

## CLEANLINESS

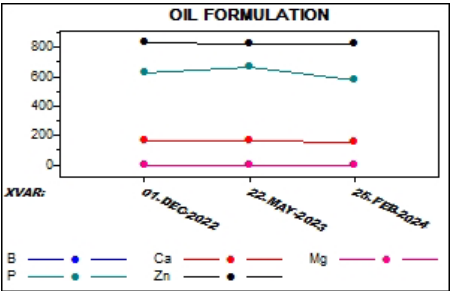
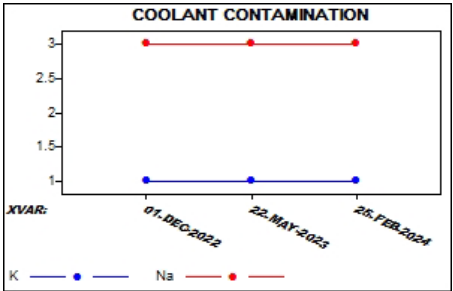
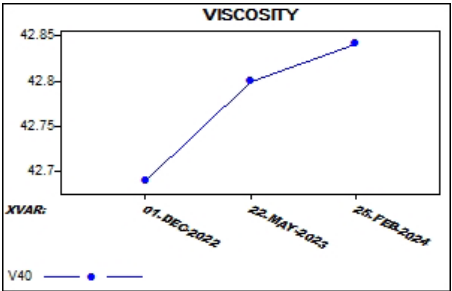
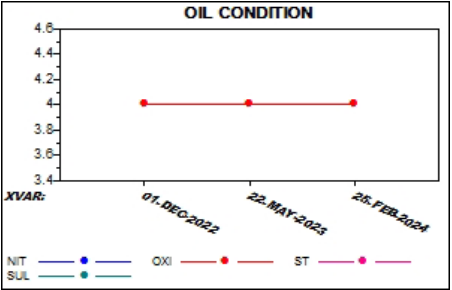
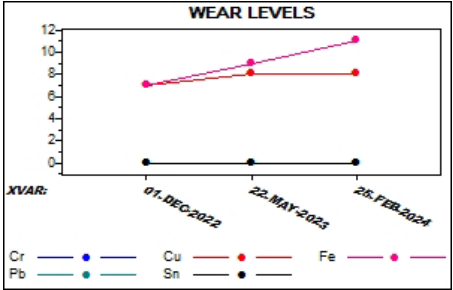
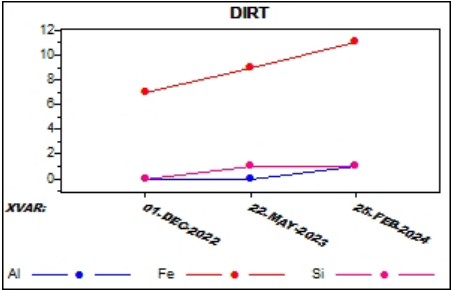
		25-Feb-24	22-May-23	01-Dec-22
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>				
ISO	ISO Code Rating	17/15/10	19/17/13	20/17/11
4μ	4μ	1275	4087	9975
6μ	6μ	185	792	667
14μ	14μ	9	49	16

## FERROUS DEBRIS

		25-Feb-24	22-May-23	01-Dec-22
PQI	PQ Index	1	1	0

## VISUAL INSPECTION

		25-Feb-24	22-May-23	01-Dec-22
DEP	DEP	A1	B1	N
DEP2	DEP2	DEB	DEB	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## FINAL DRIVE REAR LEFT

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



## Monitor Compartment

Interp By: Barry Swindells

Interpreted On: 01-Mar-24

T010-54060-0445

LABEL#: 2

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

IRON IS SLIGHTLY HIGH, TRACE AMOUNT OF LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUND. THIS MAY BE ACCEPTABLE FOR ORIGINAL FILL OIL. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. AFTER INSPECTION RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

## SAMPLE INFORMATION



Sampled Date	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54060-0445	T010-53146-0417	T010-52336-0322
Lab Date	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1443.0	1002	500
Comp Meter [Hr]	1443.0		
Meter On Fluid	1443.0	1002	500
Fluid Brand	CAT		CAT
Fluid Weight			
Fluid Type	TDTO		FACTORY FILL
Fluid Change	N	N	N
Filter Change	N	U	N
Total Fluid Added	0	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

	25-Feb-24	22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40 Viscosity at 40 C	93.07	93.35	93.25

## INFRARED (UFM) ASTM E2412

OXI Oxidation	3	3	3
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## WATER - HOTPLATE

W Water	N	N	N
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## WEAR LEVELS / ADDITIVES

	25-Feb-24	22-May-23	01-Dec-22
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu Copper	6	4	2
Fe Iron	613	404	113
Cr Chromium	8	6	2
Al Aluminum	4	3	2
Pb Lead	0	0	0
Sn Tin	0	0	0
Si Silicon	20	17	11
Na Sodium	7	6	5
K Potassium	1	2	1
Mo Molybdenum	1	0	0
Ni Nickel	0	0	0
Ag Silver	0	0	0
Ti Titanium	0	1	0
V Vanadium	0	0	0
Mn Manganese	3	2	1
Cd Cadmium	0	0	0
Ca Calcium	2853	3103	2904
P Phosphorus	906	1052	954
Zn Zinc	1204	1298	1201
Mg Magnesium	16	15	14
Ba Barium	15	14	13
B Boron	1	1	1

## CLEANLINESS

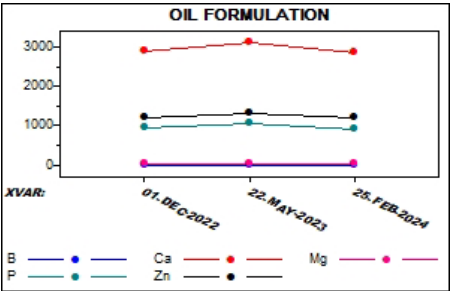
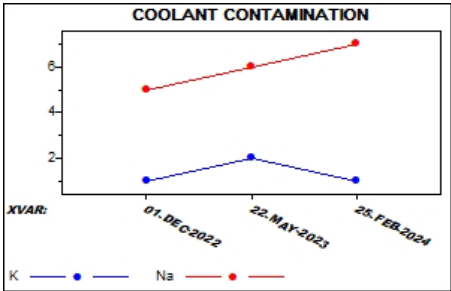
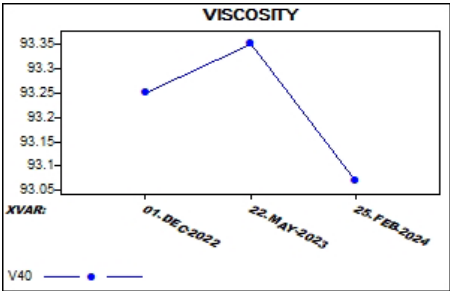
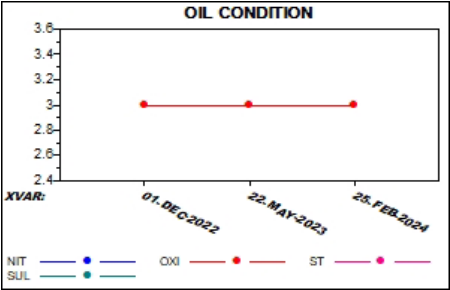
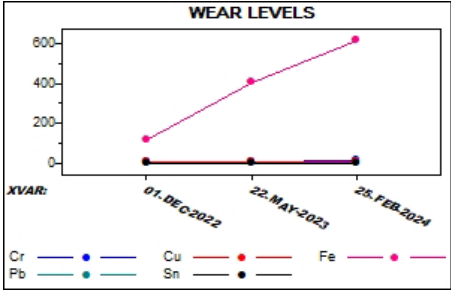
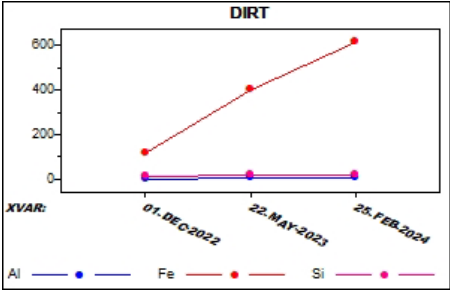
	25-Feb-24	22-May-23	01-Dec-22
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>			
ISO ISO Code Rating	21/14	22/16	23/17
6µ 6µ	12230	25893	52692
14µ 14µ	145	423	931

## FERROUS DEBRIS

PQI PQ Index	548	370	90
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## VISUAL INSPECTION

DEP DEP	C1	N	N
DEP2 DEP2	DEB	N	N



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## FINAL DRIVE REAR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

## RIGHT

CAT 323



No Action Required

Interp By: Barry Swindells

Interpreted On: 01-Mar-24

T010-54060-0446

LABEL#: 6

SHOP JOB NUM : 8W37425

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 29-Feb-24

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

## SAMPLE INFORMATION



Sampled Date	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54060-0446	T010-53146-0418	T010-52336-0323
Lab Date	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1443.0	1002	500
Comp Meter [Hr]	1443.0		
Meter On Fluid	1443.0	1002	500
Fluid Brand	CAT		CAT
Fluid Weight			
Fluid Type	TDTO		FACTORY FILL
Fluid Change	N	N	N
Filter Change	N	N	N
Total Fluid Added	0	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		25-Feb-24	22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445				
V40	Viscosity at 40 C	93.07	93.08	93.15

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	3	3	3
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## WATER - HOTPLATE

W	Water	N	N	N
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## WEAR LEVELS / ADDITIVES

25-Feb-24 22-May-23 01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	6	5	2
Fe	Iron	374	311	134
Cr	Chromium	5	5	2
Al	Aluminum	2	2	2
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	10	12	8
Na	Sodium	6	7	6
K	Potassium	2	4	2
Mo	Molybdenum	0	1	0
Ni	Nickel	0	0	0
Ag	Silver	0	0	0
Ti	Titanium	0	1	0
V	Vanadium	0	0	0
Mn	Manganese	2	2	1
Cd	Cadmium	0	0	0
Ca	Calcium	2694	3206	3022
P	Phosphorus	867	1074	988
Zn	Zinc	1148	1332	1252
Mg	Magnesium	14	15	15
Ba	Barium	34	35	32
B	Boron	1	1	1

## CLEANLINESS

25-Feb-24 22-May-23 01-Dec-22

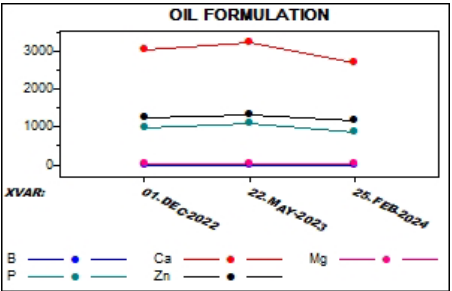
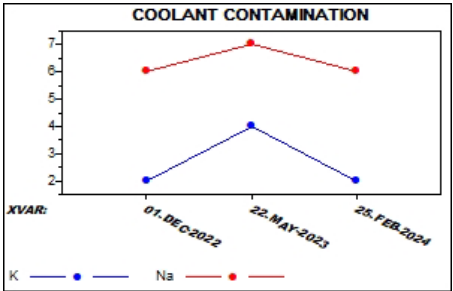
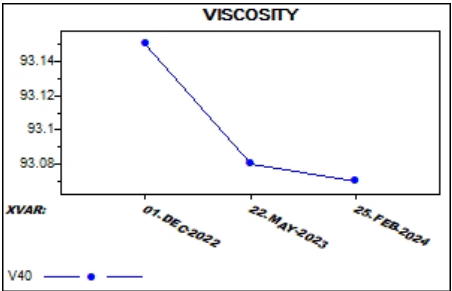
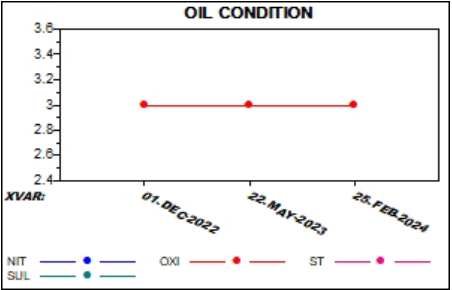
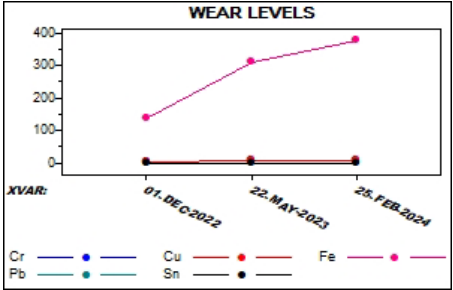
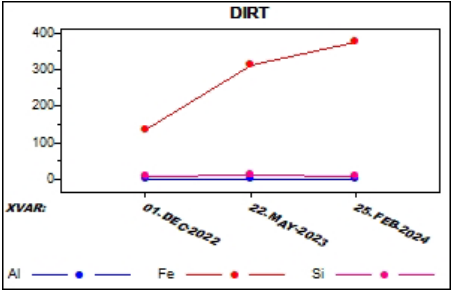
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406				
ISO	ISO Code Rating	21/14	22/16	23/17
6μ	6μ	11513	26537	44455
14μ	14μ	110	538	795

## FERROUS DEBRIS

PQI	PQ Index	348	260	104
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## VISUAL INSPECTION

DEP	DEP	A1	N	A1
DEP2	DEP2	DEB	N	DEB



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

RADIATOR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54225-2009  
SHOP JOB NUM : 8W38373  
SAMPLE SHIP TIME (days) : 5  
**WHELANS GROUP**  
**INVESTMENTS PTY LTD**  
LOCATION: Mongans Bridge  
RECEIVED DATE: 12-Aug-24

CAT 323



Monitor Compartment

Interp By: Barry Swindells  
Interpreted On: 21-Aug-24

ZINC LEVELS ARE SLIGHTLY ELEVATED. NITRITE LEVELS ARE LOW. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. ENSURE COOLING SYSTEM IS OPERATING ACCORDING TO MANUFACTURERS SPECIFICATION. WE WILL CONTINUE TO MONITOR COOLANT CONDITION. RECOMMEND ADDING CAT "ELC EXTENDER" (PART No.119-5152) WHICH BOOSTS NITRITE AND OTHER ADDITIVE LEVELS. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

SAMPLE INFORMATION



	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sampled Date	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54225-2009	T010-54060-2004	T010-53146-2018	T010-52336-2028
Lab Date	12-Aug-24	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1989.0	1443.0	1002	474
Comp Meter [Hr]		1443.0		
Meter On Fluid	1989.0	1443.0	1002	474
Fluid Brand	CAT	CAT		
Fluid Weight				
Fluid Type	ELC ADVANCED	ELC ADVANCED		
Fluid Change	N	N	N	U
Filter Change	NA	N	N	U
Total Fluid Added	0	0	0	0

CORROSION LEVELS/ CHEMISTRY

07-Aug-2425-Feb-2422-May-2301-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	4	1	1	0
Fe	Iron	0	0	0	0
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Al	Aluminum	1	0	1	0
Zn	Zinc	13	6	2	0
Na	Sodium	3658	3351	3318	3435
K	Potassium	81	70	184	68
Mo	Molybdenum	549	511	542	516

ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	2	13	16	7
NO3	Nitrate	81	43	52	21
GLO	Glycolate	965	872	594	428

ADDITIONAL ANALYTES

MoO4	Molybdate	915	852	903	861
BO3	Borate	0	1	0	19
SiO3	Silicate	30	22	23	19

PREVIOUS SAMPLE

LIGHT AMOUNT OF BLACK NON-MAGNETIC PARTICLES PRESENT. ZINC LEVELS ARE SLIGHTLY ELEVATED. NITRITE LEVELS ARE LOW. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. WE WILL CONTINUE TO MONITOR COOLANT CONDITION. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

For additional sample history, go to: [S.O.S WEB](#)

ADDITIONAL CHARACTERISTICS

07-Aug-2425-Feb-2422-May-2301-Dec-22

ION CHROMATOGRAPHY (PPM) ASTM D4327

CL	Chloride	9	10	9	6
SO4	Sulfate	213	148	123	58

ADDITIONAL ANALYTES

TH	Total Hardness	7	6	4	2
----	----------------	---	---	---	---

REFRACTIVE INDEX

GL	Glycol (%)	51	50	50	49
FP	Freeze Point (°C)	-38	-37	-37	-36
BP	Boil Point (°C)	107	107	107	107

pH

pH	pH	7.4	7.8	8.2	8.9
----	----	-----	-----	-----	-----

CONDUCTIVITY (µS/cm)

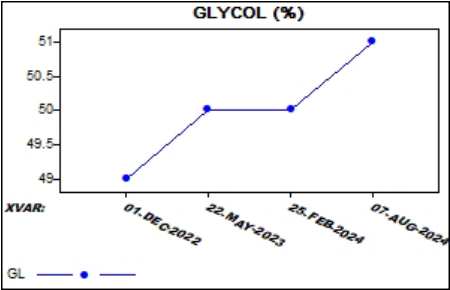
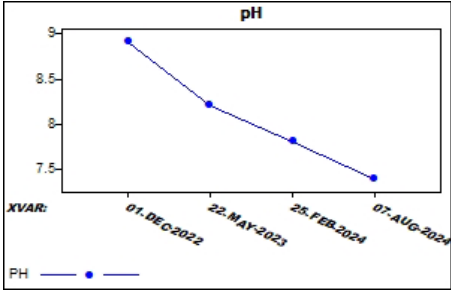
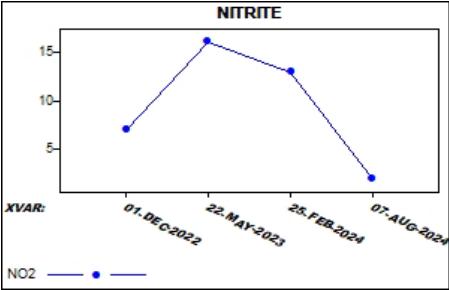
CON	Conductivity	4827	3744	3608	3644
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PHYSICAL CHARACTERISTICS

07-Aug-2425-Feb-2422-May-2301-Dec-22

PHYSICALS

Color	Color	orange	red/light	red/light	orange
App	Appearance	clear	clear	clear	clear
Odor	Odor	norm	ammonia	ammonia	norm
Oil	Oil	none	none	none	none
Foam	Foam	norm	norm	norm	norm
PAmt	Precip Amount	none	light	trace	trace
PApp	Precip Appearance	N/A	granular	granular	granular
PCol	Precip Color	N/A	blk sol	brn/blk sol	brn/blk sol
PProp	Precip Property	N/A	non-mag	non-mag	non-mag



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>



## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54225-0515

SHOP JOB NUM : 8W38373

SAMPLE SHIP TIME (days) : 5

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Mongans Bridge

RECEIVED DATE: 12-Aug-24

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Hon Yin Tham  
Interpreted On: 14-Aug-24

## SAMPLE INFORMATION

	07-Aug-24	25-Feb-24	30-Sep-23	22-May-23
Sample Id	T010-54225-0515	T010-54060-0602	T010-53277-0242	T010-53146-0211
Lab Date	12-Aug-24	29-Feb-24	04-Oct-23	26-May-23
Meter [Hr]	1989.0	1443.0	1286	1002
Comp Meter [Hr]		1443.0	1286	
Meter On Fluid	546.0	441.0	284	1002
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40		
Fluid Type	DEO-ULS(CK-4)	DEO-ULS(CK-4)		
Fluid Change	Y	Y	U	Y
Filter Change	Y	Y	U	Y
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT	THE
RECOMMENDED INTERVAL.						

For additional sample history, go to: [S.O.S WEB](#)

## CONDITION / CONTAMINATION

		07-Aug-24	25-Feb-24	30-Sep-23	22-May-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.67	12.86	12.75	12.25
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	91.02	92.50	92.13	87.28

## VISCOSITY INDEX

VI	Viscosity Index	136	137	136	134
----	-----------------	-----	-----	-----	-----

## INFRARED (UFM) ASTM E2412

ST	Soot	10	6	4	3
OXI	Oxidation	21	21	21	21
SUL	Sulfur Products	25	24	24	22
NIT	Nitration	0	0	0	7

## WATER - HOTPLATE

W	Water	N	N	N	N
---	-------	---	---	---	---

## FUEL DILUTION (SCREEN)

F	Fuel	N	N	N	N
---	------	---	---	---	---

## FUEL DILUTION (%) ASTM D7593

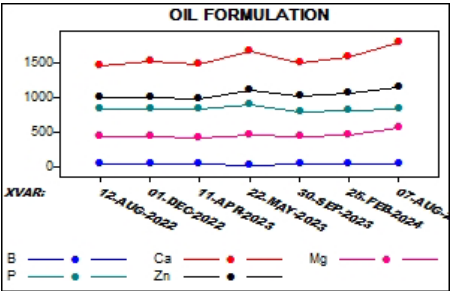
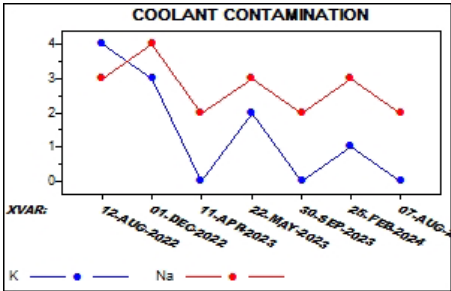
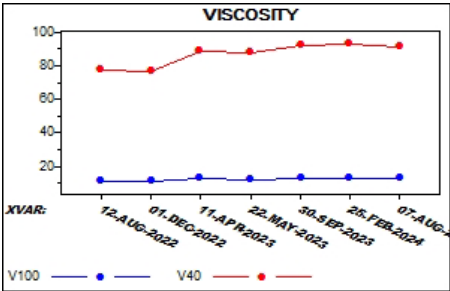
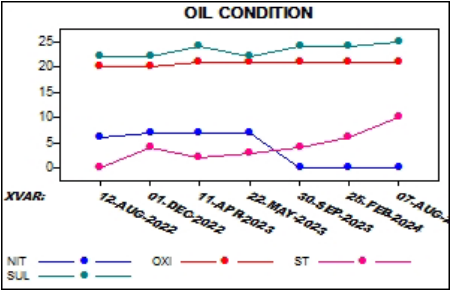
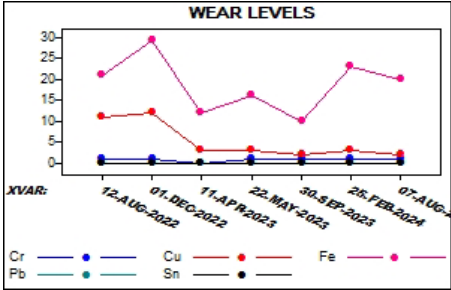
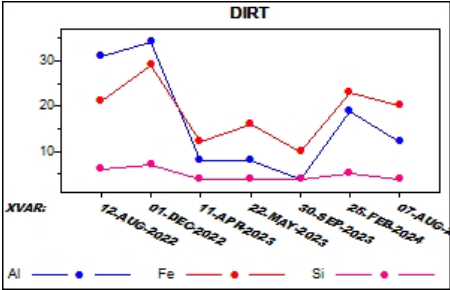
PFc	Percent Fuel	<2	<2	2.53	<2
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## CLEANLINESS

		07-Aug-24	25-Feb-24	30-Sep-23	22-May-23
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0

## WEAR LEVELS / ADDITIVES

		07-Aug-24	25-Feb-24	30-Sep-23	22-May-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	2	3	2	3
Fe	Iron	20	23	10	16
Cr	Chromium	1	1	1	1
Al	Aluminum	12	19	4	8
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	4	5	4	4
Na	Sodium	2	3	2	3
K	Potassium	0	1	0	2
Mo	Molybdenum	49	38	36	40
Ni	Nickel	1	0	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	0	1	1	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1789	1595	1502	1669
P	Phosphorus	836	809	806	909
Zn	Zinc	1150	1065	1026	1110
Mg	Magnesium	570	471	450	464
Ba	Barium	0	0	0	0
B	Boron	39	39	45	35



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## FINAL DRIVE REAR LEFT

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54225-0444

SHOP JOB NUM : 8W38373

SAMPLE SHIP TIME (days) : 5

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Mongans Bridge

RECEIVED DATE: 12-Aug-24

CAT 323



## Monitor Compartment

IRON & CHROME RESULTS APPEAR HIGH, OIL IS DARK & SAMPLE IS UNSUITABLE FOR PARTICLE COUNT. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. AS THE OIL HAS BEEN CHANGED. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. TRACE OR LOW LEVELS OF WATER DETECTED (0.1%). AFTER INSPECTION RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

Interp By: Barry Swindells

Interpreted On: 14-Aug-24

## SAMPLE INFORMATION



	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sampled Date	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54225-0444	T010-54060-0445	T010-53146-0417	T010-52336-0322
Lab Date	12-Aug-24	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1989.0	1443.0	1002	500
Comp Meter [Hr]		1443.0		
Meter On Fluid	1989.0	1443.0	1002	500
Fluid Brand	CAT	CAT		CAT
Fluid Weight	50			
Fluid Type	TDTO	TDTO		FACTORY FILL
Fluid Change	Y	N	N	N
Filter Change	U	N	U	N
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

IRON IS SLIGHTLY HIGH, TRACE AMOUNT OF LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUND. THIS MAY BE ACCEPTABLE FOR ORIGINAL FILL OIL. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. AFTER INSPECTION RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40 Viscosity at 40 C	93.58	93.07	93.35	93.25

## WEAR LEVELS / ADDITIVES

07-Aug-24 25-Feb-24 22-May-23 01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	7	6	4	2
Fe	Iron	970	613	404	113
Cr	Chromium	13	8	6	2
Al	Aluminum	8	4	3	2
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	35	20	17	11
Na	Sodium	8	7	6	5
K	Potassium	4	1	2	1
Mo	Molybdenum	1	1	0	0
Ni	Nickel	1	0	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	1	0	1	0
V	Vanadium	0	0	0	0
Mn	Manganese	4	3	2	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	3266	2853	3103	2904
P	Phosphorus	996	906	1052	954
Zn	Zinc	1352	1204	1298	1201
Mg	Magnesium	18	16	15	14
Ba	Barium	16	15	14	13
B	Boron	3	1	1	1

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	3	3	3	3
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## WATER - HOTPLATE

W	Water	T	N	N	N
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## CLEANLINESS

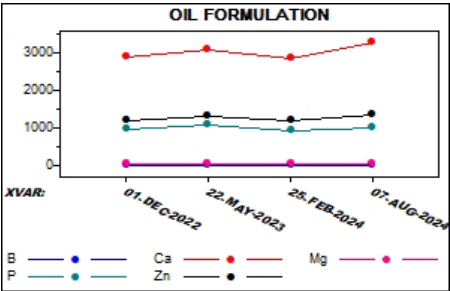
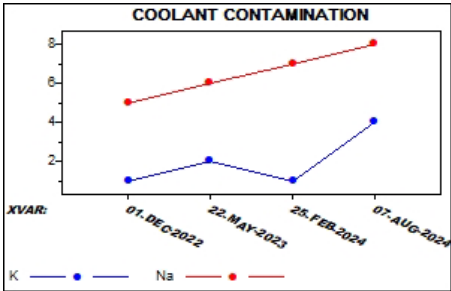
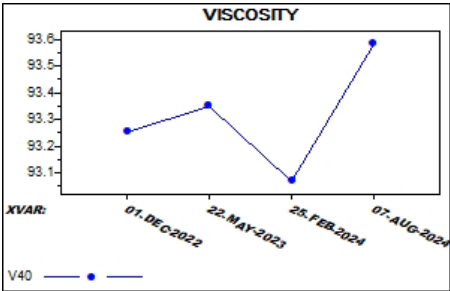
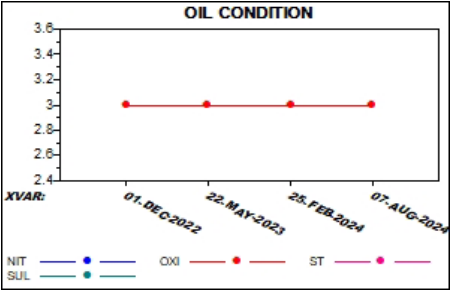
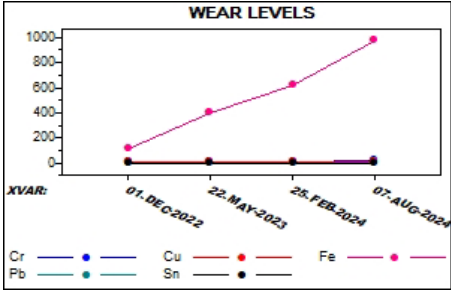
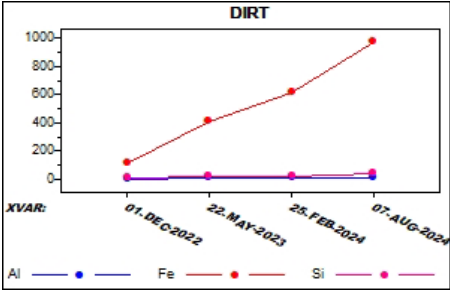
		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406					
ISO	ISO Code Rating	H2O/DARK	21/14	22/16	23/17
6µ	6µ		12230	25893	52692
14µ	14µ		145	423	931

## FERROUS DEBRIS

PQI	PQ Index	776	548	370	90
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## VISUAL INSPECTION

DEP	DEP	DARK	C1	N	N
DEP2	DEP2	N	DEB	N	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

FINAL DRIVE REAR  
RIGHT

EQUIP NUM: E16  
CAT 323

SERIAL NUMBER: LTN10065



Monitor Compartment

Interp By: Barry Swindells  
Interpreted On: 14-Aug-24

T010-54225-0445  
SHOP JOB NUM : 8W38373  
SAMPLE SHIP TIME (days) : 5  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: Mongans Bridge  
RECEIVED DATE: 12-Aug-24

IRON RESULT APPEAR HIGH, INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. AS THE OIL HAS BEEN CHANGED. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. TRACE OR LOW LEVELS OF WATER DETECTED (0.1%). UNABLE TO TEST FOR LPD (15 MICRON) DUE TO THE TRACE OF WATER IN SAMPLE. AFTER INSPECTION RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

SAMPLE INFORMATION



Sampled Date	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54225-0445	T010-54060-0446	T010-53146-0418	T010-52336-0323
Lab Date	12-Aug-24	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1989.0	1443.0	1002	500
Comp Meter [Hr]		1443.0		
Meter On Fluid	1989.0	1443.0	1002	500
Fluid Brand	CAT	CAT		CAT
Fluid Weight	50			
Fluid Type	TDTO	TDTO		FACTORY FILL
Fluid Change	Y	N	N	N
Filter Change	U	N	N	N
Total Fluid Added	0	0	0	0

PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

For additional sample history, go to: [S.O.S WEB](#)

CONDITION / CONTAMINATION

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	94.79	93.07	93.08	93.15

INFRARED (UFM) ASTM E2412

OXI	Oxidation	3	3	3	3
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WATER - HOTPLATE

W	Water	T	N	N	N
---	-------	---	---	---	---

CLEANLINESS

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406					
ISO	ISO Code Rating	H2O	21/14	22/16	23/17
6µ	6µ		11513	26537	44455
14µ	14µ		110	538	795

FERROUS DEBRIS

PQI	PQ Index	452	348	260	104
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VISUAL INSPECTION

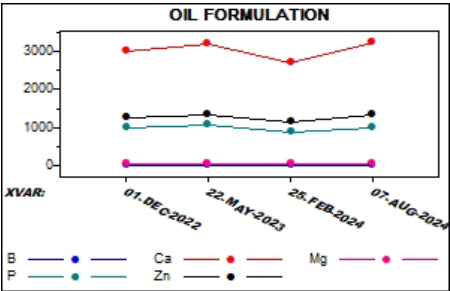
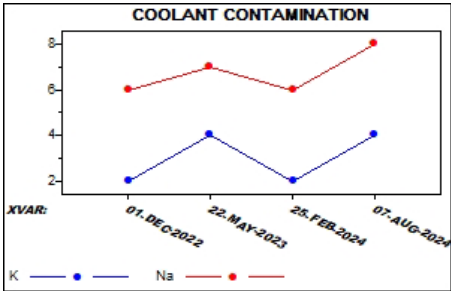
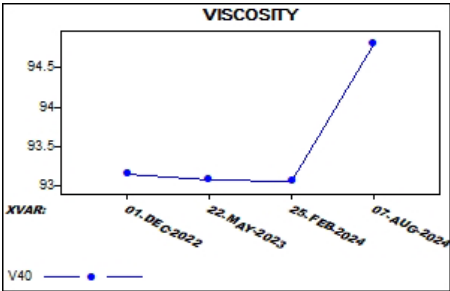
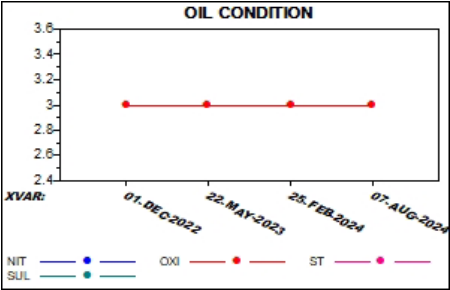
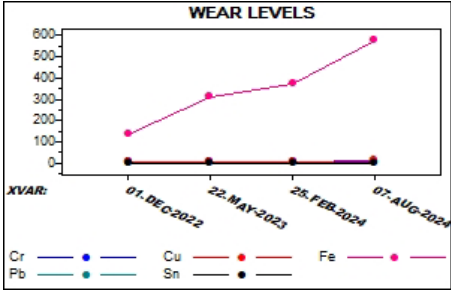
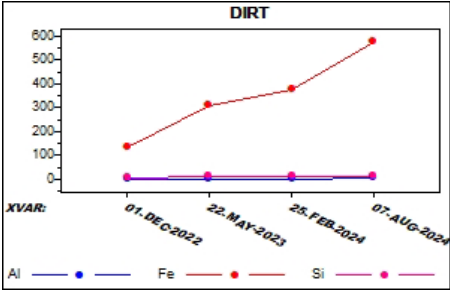
DEP	DEP	A2	A1	N	A1
DEP2	DEP2	DEB	DEB	N	DEB

WEAR LEVELS / ADDITIVES

07-Aug-24 25-Feb-24 22-May-23 01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]

Cu	Copper	9	6	5	2
Fe	Iron	573	374	311	134
Cr	Chromium	7	5	5	2
Al	Aluminum	3	2	2	2
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	12	10	12	8
Na	Sodium	8	6	7	6
K	Potassium	4	2	4	2
Mo	Molybdenum	1	0	1	0
Ni	Nickel	0	0	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	1	0
V	Vanadium	0	0	0	0
Mn	Manganese	3	2	2	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	3230	2694	3206	3022
P	Phosphorus	969	867	1074	988
Zn	Zinc	1342	1148	1332	1252
Mg	Magnesium	16	14	15	15
Ba	Barium	40	34	35	32
B	Boron	2	1	1	1



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## SWING DRIVE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54225-0446

SHOP JOB NUM : 8W38373

SAMPLE SHIP TIME (days) : 5

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Mongans Bridge

RECEIVED DATE: 12-Aug-24

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 14-Aug-24

## SAMPLE INFORMATION

	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sampled Date	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54225-0446	T010-54060-0444	T010-53146-0419	T010-52336-0321
Lab Date	12-Aug-24	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1989.0	1443.0	1002	500
Comp Meter [Hr]		1443.0		
Meter On Fluid	987.0	441.0	1002	500
Fluid Brand	CAT	CAT		CAT
Fluid Weight	50	50		
Fluid Type	TDTO	TDTO		FACTORY FILL
Fluid Change	Y	N	Y	U
Filter Change	NA	N	N	NA
Make Up Fluid [MI]		500.0		
Total Fluid Added	500.0	500.0	0	0

## WEAR LEVELS / ADDITIVES

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	0	0	0	0
Fe	Iron	13	10	71	59
Cr	Chromium	0	0	1	1
Al	Aluminum	1	1	1	1
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	3	3	7	6
Na	Sodium	2	2	4	3
K	Potassium	1	0	1	0
Mo	Molybdenum	1	0	0	0
Ni	Nickel	0	0	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	0	0	1	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	2954	2558	3176	3022
P	Phosphorus	875	811	1061	994
Zn	Zinc	1214	1077	1318	1247
Mg	Magnesium	9	8	16	15
Ba	Barium	0	1	17	15
B	Boron	1	1	1	1

## PREVIOUS SAMPLE

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT THE
					RECOMMENDED INTERVAL.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	195.7	185.7	93.50	93.90

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	4	4	3	3
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## WATER - HOTPLATE

W	Water	N	N	N	N
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## CLEANLINESS

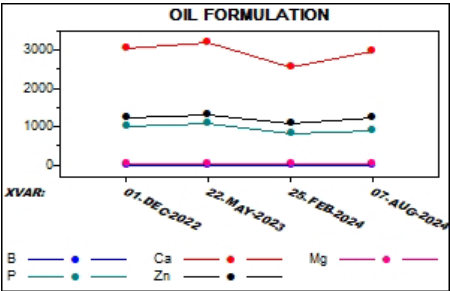
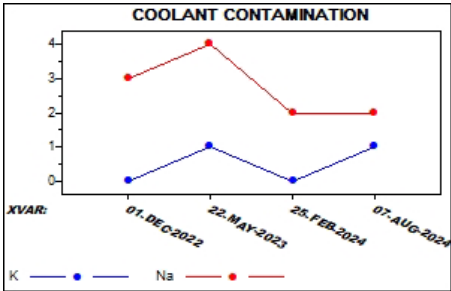
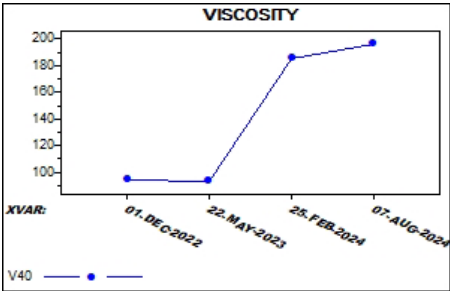
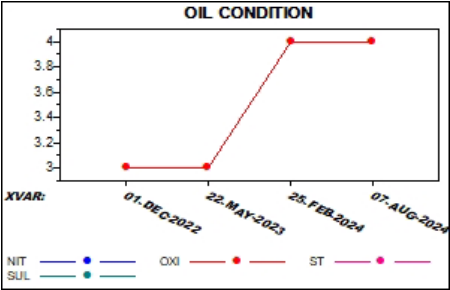
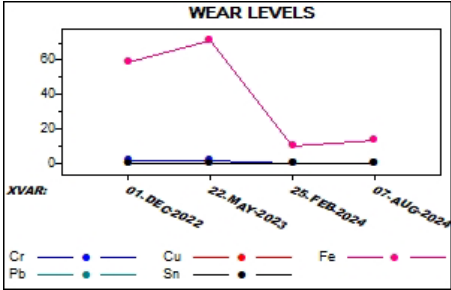
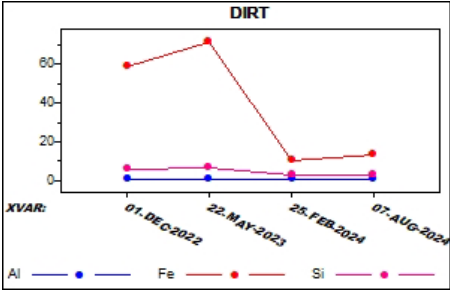
		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406					
ISO	ISO Code Rating	19/13	19/15	20/15	22/15
6µ	6µ	3392	3140	9711	28548
14µ	14µ	40	192	226	205

## FERROUS DEBRIS

PQI	PQ Index	1	0	16	15
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## VISUAL INSPECTION

DEP	DEP	N	N	B1	N
DEP2	DEP2	N	N	DEB	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>



## HYDRAULIC SYSTEM

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-54225-0412

SHOP JOB NUM : 8W38373

SAMPLE SHIP TIME (days) : 5

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Mongans Bridge

RECEIVED DATE: 12-Aug-24

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 14-Aug-24

## SAMPLE INFORMATION

	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sampled Date	07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
Sample Id	T010-54225-0412	T010-54060-0407	T010-53146-0310	T010-52336-0306
Lab Date	12-Aug-24	29-Feb-24	26-May-23	02-Dec-22
Meter [Hr]	1989.0	1443.0	1002	500
Comp Meter [Hr]		1443.0		
Meter On Fluid	1989.0	1443.0	1002	500
Fluid Brand	CAT	CAT		CAT
Fluid Weight	10W	10W		
Fluid Type	HYDO ADVANCED	HYDO ADVANCED		FACTORY FILL
Fluid Change	N	N	N	U
Filter Change	N	N	N	N
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT	THE
						RECOMMENDED INTERVAL.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V40	Viscosity at 40 C	42.34	42.84	42.80	42.69

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	4	4	4	4
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## WATER - HOTPLATE

W	Water	N	N	N	N
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## CLEANLINESS

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>					
ISO	ISO Code Rating	15/13/9	17/15/10	19/17/13	20/17/11
4μ	4μ	293	1275	4087	9975
6μ	6μ	55	185	792	667
14μ	14μ	5	9	49	16

## FERROUS DEBRIS

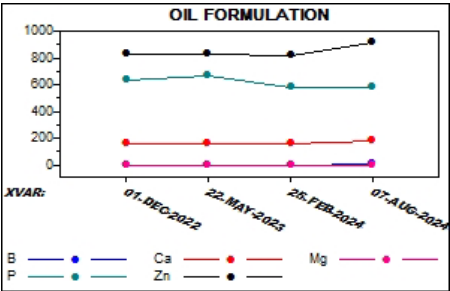
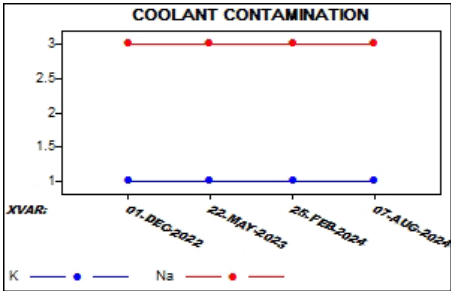
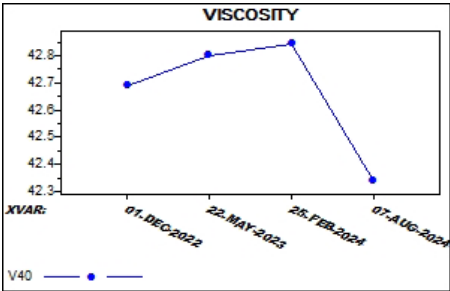
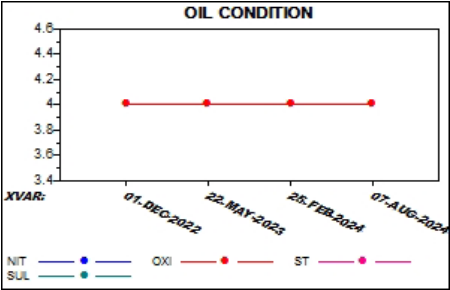
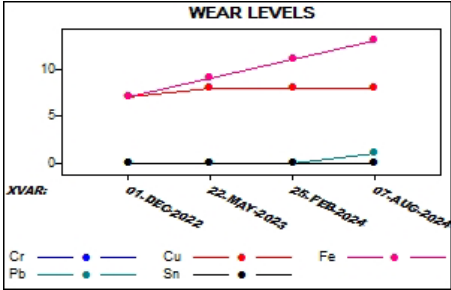
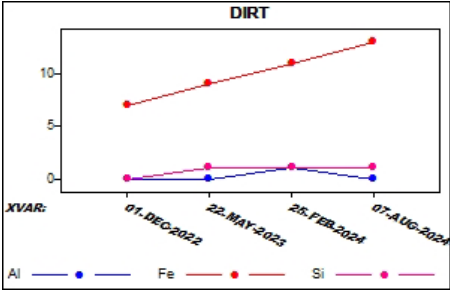
PQI	PQ Index	0	1	1	0
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## VISUAL INSPECTION

DEP	DEP	A1	A1	B1	N
DEP2	DEP2	DEB	DEB	DEB	N

## WEAR LEVELS / ADDITIVES

		07-Aug-24	25-Feb-24	22-May-23	01-Dec-22
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>					
Cu	Copper	8	8	8	7
Fe	Iron	13	11	9	7
Cr	Chromium	0	0	0	0
Al	Aluminum	0	1	0	0
Pb	Lead	1	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	1	1	1	0
Na	Sodium	3	3	3	3
K	Potassium	1	1	1	1
Mo	Molybdenum	1	0	0	0
Ni	Nickel	0	0	1	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	0	0	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	175	156	162	162
P	Phosphorus	575	577	669	629
Zn	Zinc	911	817	826	827
Mg	Magnesium	1	1	1	1
Ba	Barium	0	1	1	1
B	Boron	2	1	1	1



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-55163-0234

LABEL#: 250852435

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bairnsdale

RECEIVED DATE: 12-Jun-25

CAT 323



## Monitor Compartment

ALUMINUM IS SLIGHTLY ELEVATED. SUGGEST CUT OPEN FILTER(S) AND INSPECT FOR DEBRIS. CHECK OPERATING TEMPERATURE. MONITOR IDLE TIME. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. AS THE OIL HAS NOT BEEN CHANGED. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. RECOMMEND SCHEDULE UNIT FOR INSPECTION ASAP. AFTER INSPECTION RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

Interp By: Barry Swindells

Interpreted On: 16-Jun-25

## SAMPLE INFORMATION



	08-Jun-25	07-Aug-24	25-Feb-24	30-Sep-23
Sampled Date	08-Jun-25	07-Aug-24	25-Feb-24	30-Sep-23
Sample Id	T010-55163-0234	T010-54225-0515	T010-54060-0602	T010-53277-0242
Lab Date	12-Jun-25	12-Aug-24	29-Feb-24	04-Oct-23
Meter [Hr]	2336	1989.0	1443.0	1286
Comp Meter [Hr]			1443.0	1286
Meter On Fluid		546.0	441.0	284
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	
Fluid Type	DEO-ULS(CK-4)	DEO-ULS(CK-4)	DEO-ULS(CK-4)	
Fluid Change	N	Y	Y	U
Filter Change	N	Y	Y	U
Total Fluid Added	0	0	0	0

## WEAR LEVELS / ADDITIVES

08-Jun-25 07-Aug-24 25-Feb-24 30-Sep-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	2	2	3	2
Fe	Iron	20	20	23	10
Cr	Chromium	1	1	1	1
Al	Aluminum	15	12	19	4
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	5	4	5	4
Na	Sodium	2	2	3	2
K	Potassium	0	0	1	0
Mo	Molybdenum	47	49	38	36
Ni	Nickel	0	1	0	0
Ag	Silver	0	0	0	0
Ti	Titanium	0	0	0	0
V	Vanadium	0	0	0	0
Mn	Manganese	0	0	1	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1843	1789	1595	1502
P	Phosphorus	973	836	809	806
Zn	Zinc	1195	1150	1065	1026
Mg	Magnesium	604	570	471	450
Ba	Barium	0	0	0	0
B	Boron	54	39	39	45

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		08-Jun-25	07-Aug-24	25-Feb-24	30-Sep-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.67	12.67	12.86	12.75
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	91.91	91.02	92.50	92.13

## VISCOSITY INDEX

VI	Viscosity Index	135	136	137	136
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## INFRARED (UFM) ASTM E2412

ST	Soot	4	10	6	4
OXI	Oxidation	20	21	21	21
SUL	Sulfate By-Product	24	25	24	24
	Sulfur Products	24	25	24	24
NIT	Nitration	0	0	0	0

## WATER - HOTPLATE

W	Water	N	N	N	N
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## FUEL DILUTION (SCREEN)

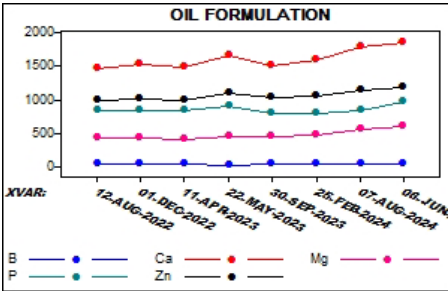
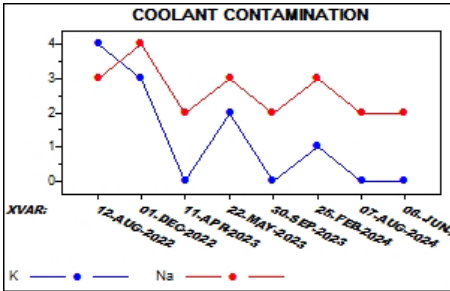
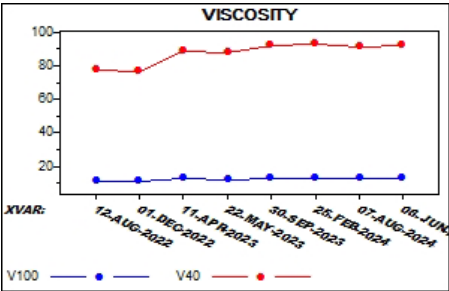
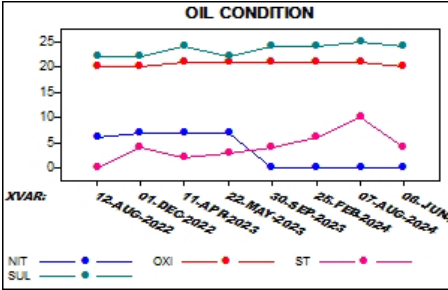
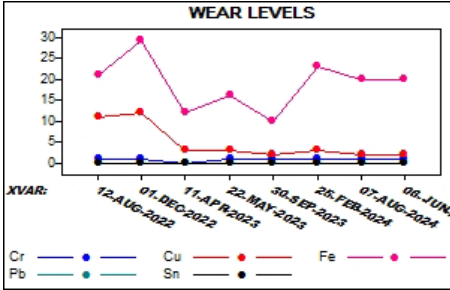
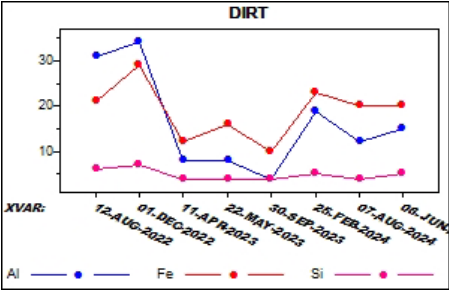
F	Fuel	N	N	N	N
---	------	---	---	---	---

## FUEL DILUTION (%) ASTM D7593

PFc	Percent Fuel	<2	<2	<2	2.53
-----	--------------	----	----	----	------

## CLEANLINESS

		08-Jun-25	07-Aug-24	25-Feb-24	30-Sep-23
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0



Report Comment

VisionLink® will be the new home for S-O-SSM Services fluid analysis. Begin the transition to VisionLink now - Sign up or log into [vl.cat.com](https://vl.cat.com) to update your settings, manage your fleet, configure your jobsites (groups), and view your samples. The ability for users to submit samples, track samples, view and graph sample history, and download reports are coming to VisionLink soon.

## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-52229-0236

SHOP JOB NUM : wgi2208

SAMPLE SHIP TIME (days) : 5

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: kilmany

RECEIVED DATE: 17-Aug-22

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 29-Aug-22

## SAMPLE INFORMATION



Sampled Date	12-Aug-22
Sample Id	T010-52229-0236
Lab Date	17-Aug-22
Meter [Hr]	224
Meter On Fluid	224
Fluid Brand	FACTORYFIL
Fluid Weight	15W-40
Fluid Type	DEO ULS
Fluid Change	N
Filter Change	N

## PREVIOUS SAMPLE

For additional sample history, go to:

[my.cat.com](https://my.cat.com)

## CONDITION / CONTAMINATION

12-Aug-22

## VISCOSITY (CENTISTOKES) ASTM D445

V100 Viscosity at 100 C 11.35

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 77.45

## VISCOSITY INDEX

VI Viscosity Index 139

## WEAR LEVELS / ADDITIVES

12-Aug-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	11
Fe	Iron	21
Cr	Chromium	1
Al	Aluminum	31
Pb	Lead	0
Sn	Tin	0
Si	Silicon	6
Na	Sodium	3
K	Potassium	4
Mo	Molybdenum	37
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	1
Cd	Cadmium	0
Ca	Calcium	1470
P	Phosphorus	845
Zn	Zinc	1000
Mg	Magnesium	433
Ba	Barium	0
B	Boron	54

## INFRARED (UFM) ASTM E2412

ST	Soot	0
OXI	Oxidation	20
SUL	Sulfur Products	22
NIT	Nitration	6

## WATER - HOTPLATE

W Water N

## FUEL DILUTION (SCREEN)

F Fuel N

## FUEL DILUTION (%) ASTM D7593

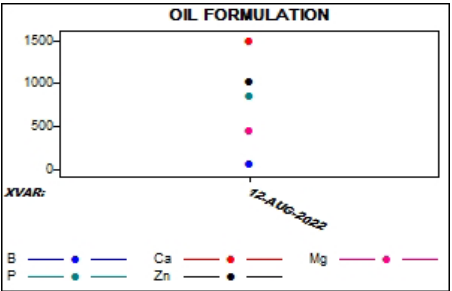
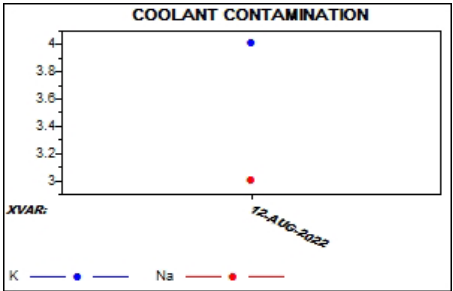
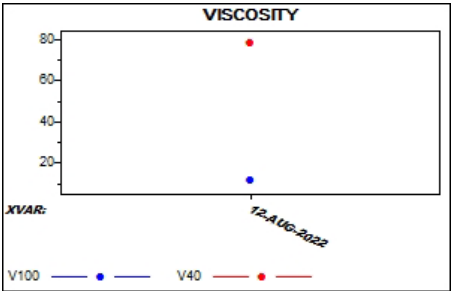
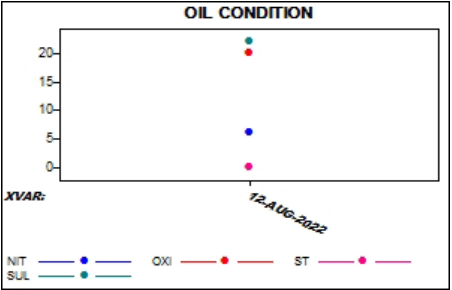
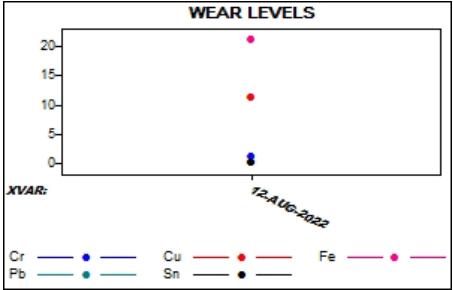
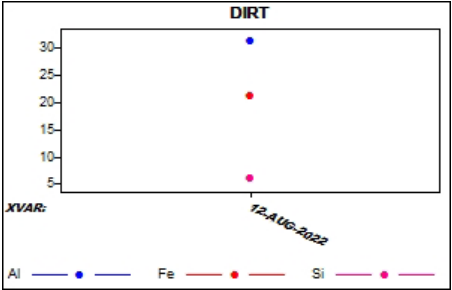
PFc Percent Fuel 2.12

## CLEANLINESS

12-Aug-22

## FERROUS DEBRIS

PQI PQ Index 0



REPORT COMMENT

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>

## RADIATOR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



No Action Required

COOLANT CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 08-Dec-22

T010-52336-2028

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

## SAMPLE INFORMATION



Sampled Date	01-Dec-22
Sample Id	T010-52336-2028
Lab Date	02-Dec-22
Meter [Hr]	474
Meter On Fluid	474
Fluid Brand	
Fluid Weight	
Fluid Type	
Fluid Change	U
Filter Change	U
Total Fluid Added	0

## CORROSION LEVELS/ CHEMISTRY

01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	0
Fe	Iron	0
Pb	Lead	0
Sn	Tin	0
Al	Aluminum	0
Zn	Zinc	0
Na	Sodium	3435
K	Potassium	68
Mo	Molybdenum	516

## ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	7
NO3	Nitrate	21
GLO	Glycolate	428

## ADDITIONAL ANALYTES

MoO4	Molybdate	861
BO3	Borate	19
SiO3	Silicate	19

## PREVIOUS SAMPLE

For additional sample history, go to:

[my.cat.com](https://my.cat.com)

## ADDITIONAL CHARACTERISTICS

01-Dec-22

## ION CHROMATOGRAPHY (PPM) ASTM D4327

CL	Chloride	6
SO4	Sulfate	58

## ADDITIONAL ANALYTES

TH	Total Hardness	2
----	----------------	---

## REFRACTIVE INDEX

GL	Glycol (%)	49
FP	Freeze Point (°C)	-36
BP	Boil Point (°C)	107

## pH

pH	pH	8.9
----	----	-----

## CONDUCTIVITY (µS/cm)

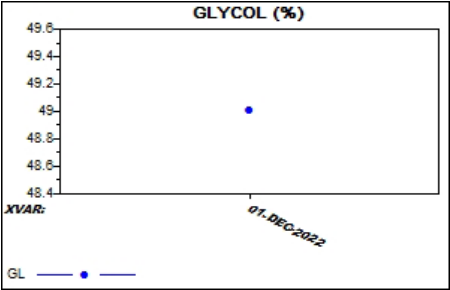
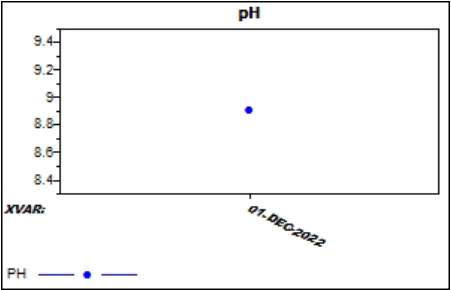
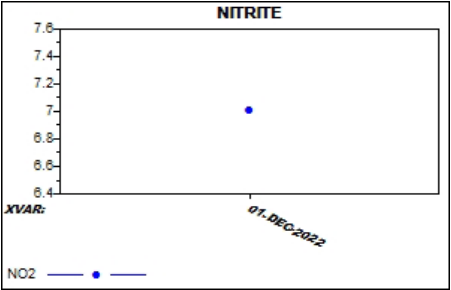
CON	Conductivity	3644
-----	--------------	------

## PHYSICAL CHARACTERISTICS

01-Dec-22

## PHYSICALS

Color	Color	orange
App	Appearance	clear
Odor	Odor	norm
Oil	Oil	none
Foam	Foam	norm
PAmt	Precip Amount	trace
PApp	Precip Appearance	granular
PCol	Precip Color	brn/blk sol
PProp	Precip Property	non-mag



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>



## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



## Monitor Compartment

Interp By: Barry Swindells

Interpreted On: 05-Dec-22

T010-52336-0245

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

WEAR LEVELS REMAIN SLIGHTLY HIGH, THIS MAY BE ACCEPTABLE FOR ORIGINAL FILL OIL. LEVELS SHOULD SETTLE DOWN AFTER ONE OR TWO OIL CHANGES. AS THE OIL HAS BEEN CHANGED, WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. RESAMPLE IN 250 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION



	01-Dec-22	12-Aug-22
Sampled Date	01-Dec-22	12-Aug-22
Sample Id	T010-52336-0245	T010-52229-0236
Lab Date	02-Dec-22	17-Aug-22
Meter [Hr]	500	224
Meter On Fluid	500	224
Fluid Brand	FACTORYFIL	FACTORYFIL
Fluid Weight	15W-40	15W-40
Fluid Type	DEO ULS	DEO ULS
Fluid Change	Y	N
Filter Change	Y	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

For additional sample history, go to:

[my.cat.com](https://my.cat.com)

## CONDITION / CONTAMINATION

		01-Dec-22	12-Aug-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V100	Viscosity at 100 C	11.36	11.35
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	76.19	77.45

## VISCOSITY INDEX

VI	Viscosity Index	141	139
----	-----------------	-----	-----

## INFRARED (UFM) ASTM E2412

ST	Soot	4	0
OXI	Oxidation	20	20
SUL	Sulfur Products	22	22
NIT	Nitration	7	6

## WATER - HOTPLATE

W	Water	N	N
---	-------	---	---

## FUEL DILUTION (SCREEN)

F	Fuel	N	N
---	------	---	---

## FUEL DILUTION (%) ASTM D7593

PFc	Percent Fuel	3.03	2.12
-----	--------------	------	------

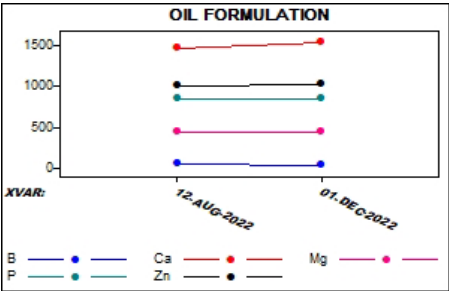
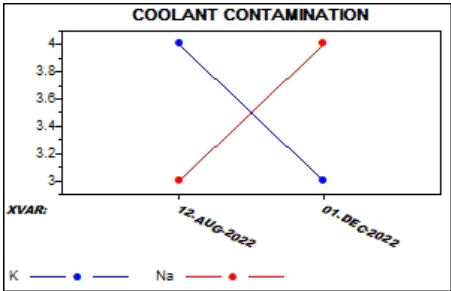
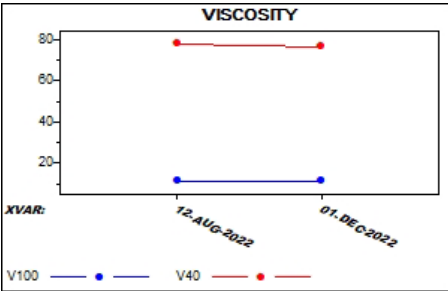
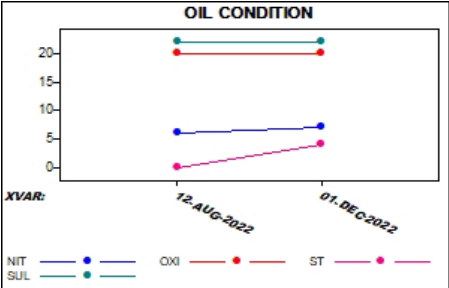
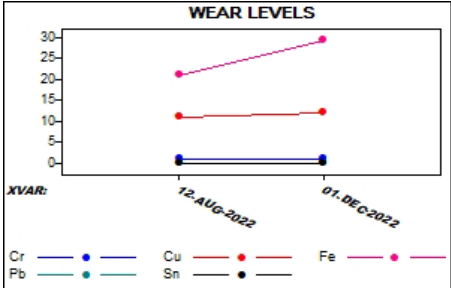
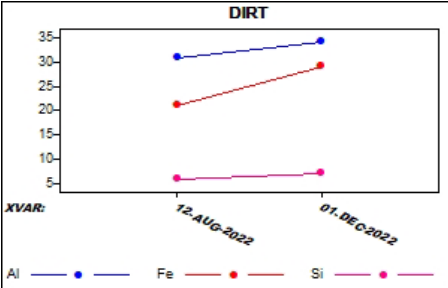
## CLEANLINESS

		01-Dec-22	12-Aug-22
<b>FERROUS DEBRIS</b>			
PQI	PQ Index	0	0

## WEAR LEVELS / ADDITIVES

01-Dec-22 12-Aug-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	12	11
Fe	Iron	29	21
Cr	Chromium	1	1
Al	Aluminum	34	31
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	7	6
Na	Sodium	4	3
K	Potassium	3	4
Mo	Molybdenum	37	37
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	2	1
Cd	Cadmium	0	0
Ca	Calcium	1527	1470
P	Phosphorus	837	845
Zn	Zinc	1013	1000
Mg	Magnesium	440	433
Ba	Barium	0	0
B	Boron	39	54



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## HYDRAULIC SYSTEM

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-52336-0306

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.  
TO DEVELOP A TREND.

Interp By: Barry Swindells

Interpreted On: 05-Dec-22

MORE SAMPLES NEEDED

## SAMPLE INFORMATION



Sampled Date	01-Dec-22
Sample Id	T010-52336-0306
Lab Date	02-Dec-22
Meter [Hr]	500
Meter On Fluid	500
Fluid Brand	CAT
Fluid Weight	
Fluid Type	FACTORY FILL
Fluid Change	U
Filter Change	N
Total Fluid Added	0

## PREVIOUS SAMPLE

For additional sample history, go to: [my.cat.com](http://my.cat.com)

## CONDITION / CONTAMINATION

01-Dec-22

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 42.69

## INFRARED (UFM) ASTM E2412

OXI Oxidation 4

## WATER - HOTPLATE

W Water N

## WEAR LEVELS / ADDITIVES

01-Dec-22

## ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]

Cu	Copper	7
Fe	Iron	7
Cr	Chromium	0
Al	Aluminum	0
Pb	Lead	0
Sn	Tin	0
Si	Silicon	0
Na	Sodium	3
K	Potassium	1
Mo	Molybdenum	0
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	0
Cd	Cadmium	0
Ca	Calcium	162
P	Phosphorus	629
Zn	Zinc	827
Mg	Magnesium	1
Ba	Barium	1
B	Boron	1

## CLEANLINESS

01-Dec-22

## PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406

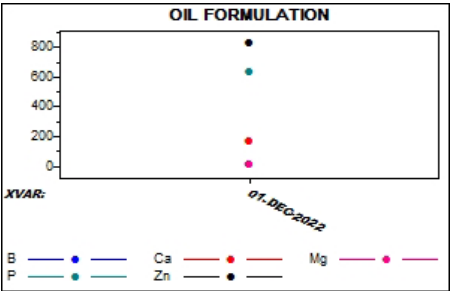
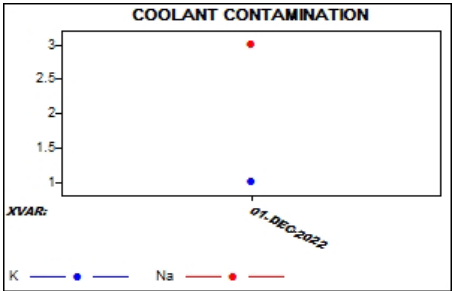
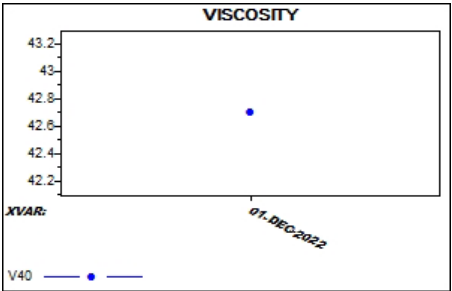
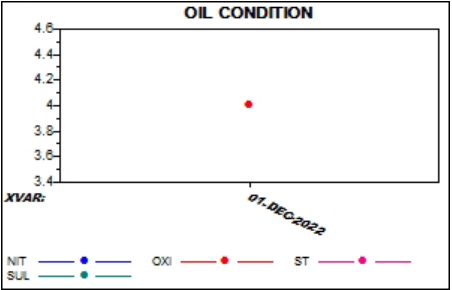
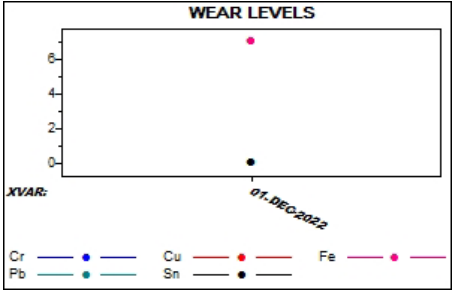
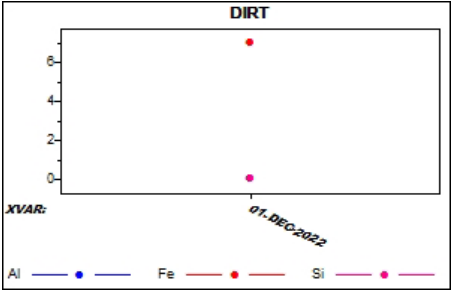
ISO	ISO Code Rating	20/17/11
4μ	4μ	9975
6μ	6μ	667
14μ	14μ	16

## FERROUS DEBRIS

PQI PQ Index 0

## VISUAL INSPECTION

DEP	DEP	N
DEP2	DEP2	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>

## FINAL DRIVE REAR LEFT

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.  
TO DEVELOP A TREND.

Interp By: Barry Swindells

Interpreted On: 05-Dec-22

MORE SAMPLES NEEDED

T010-52336-0322

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

## SAMPLE INFORMATION



Sampled Date	01-Dec-22
Sample Id	T010-52336-0322
Lab Date	02-Dec-22
Meter [Hr]	500
Meter On Fluid	500
Fluid Brand	CAT
Fluid Weight	
Fluid Type	FACTORY FILL
Fluid Change	N
Filter Change	N
Total Fluid Added	0

## PREVIOUS SAMPLE

For additional sample history, go to: [my.cat.com](http://my.cat.com)

## CONDITION / CONTAMINATION

01-Dec-22

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 93.25

## INFRARED (UFM) ASTM E2412

OXI Oxidation 3

## WATER - HOTPLATE

W Water N

## WEAR LEVELS / ADDITIVES

01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	2
Fe	Iron	113
Cr	Chromium	2
Al	Aluminum	2
Pb	Lead	0
Sn	Tin	0
Si	Silicon	11
Na	Sodium	5
K	Potassium	1
Mo	Molybdenum	0
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	1
Cd	Cadmium	0
Ca	Calcium	2904
P	Phosphorus	954
Zn	Zinc	1201
Mg	Magnesium	14
Ba	Barium	13
B	Boron	1

## CLEANLINESS

01-Dec-22

## PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406

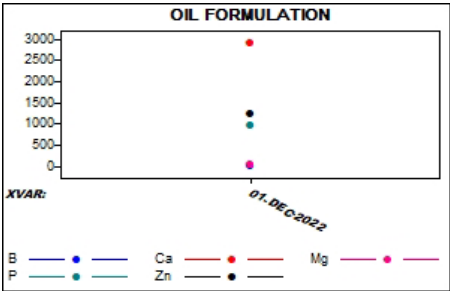
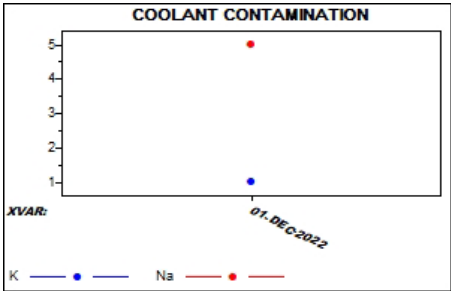
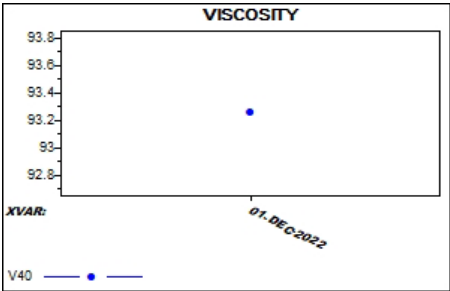
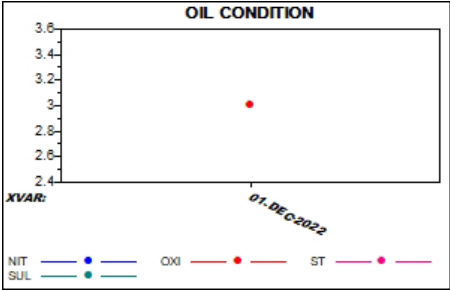
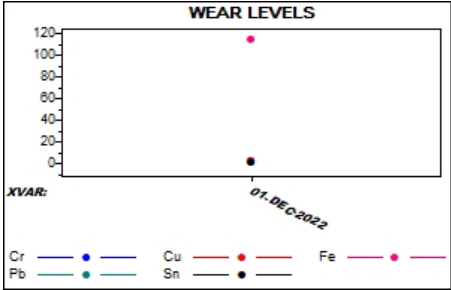
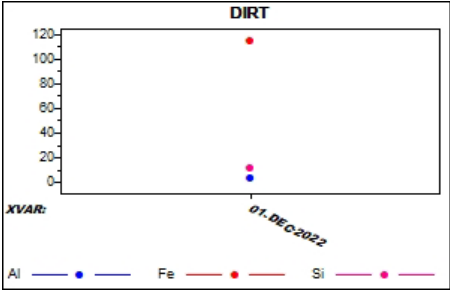
ISO	ISO Code Rating	23/17
6μ	6μ	52692
14μ	14μ	931

## FERROUS DEBRIS

PQI PQ Index 90

## VISUAL INSPECTION

DEP	DEP	N
DEP2	DEP2	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## FINAL DRIVE REAR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

## RIGHT

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.  
TO DEVELOP A TREND.

Interp By: Barry Swindells

Interpreted On: 05-Dec-22

MORE SAMPLES NEEDED

T010-52336-0323

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

## SAMPLE INFORMATION



Sampled Date	01-Dec-22
Sample Id	T010-52336-0323
Lab Date	02-Dec-22
Meter [Hr]	500
Meter On Fluid	500
Fluid Brand	CAT
Fluid Weight	
Fluid Type	FACTORY FILL
Fluid Change	N
Filter Change	N
Total Fluid Added	0

## PREVIOUS SAMPLE

For additional sample history, go to:

[my.cat.com](http://my.cat.com)

## CONDITION / CONTAMINATION

01-Dec-22

## VISCOSITY (CENTISTOKES) ASTM D445

V40	Viscosity at 40 C	93.15
-----	-------------------	-------

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	3
-----	-----------	---

## WATER - HOTPLATE

W	Water	N
---	-------	---

## WEAR LEVELS / ADDITIVES

01-Dec-22

## ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]

Cu	Copper	2
Fe	Iron	134
Cr	Chromium	2
Al	Aluminum	2
Pb	Lead	0
Sn	Tin	0
Si	Silicon	8
Na	Sodium	6
K	Potassium	2
Mo	Molybdenum	0
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	1
Cd	Cadmium	0
Ca	Calcium	3022
P	Phosphorus	988
Zn	Zinc	1252
Mg	Magnesium	15
Ba	Barium	32
B	Boron	1

## CLEANLINESS

01-Dec-22

## PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406

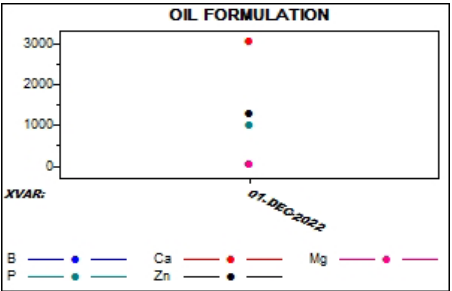
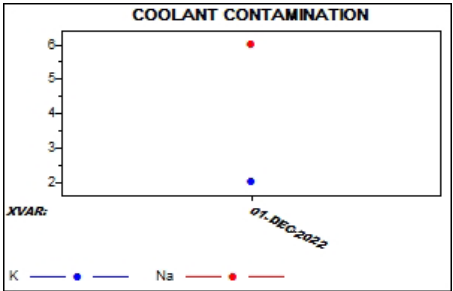
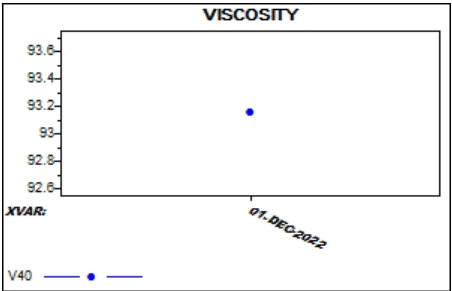
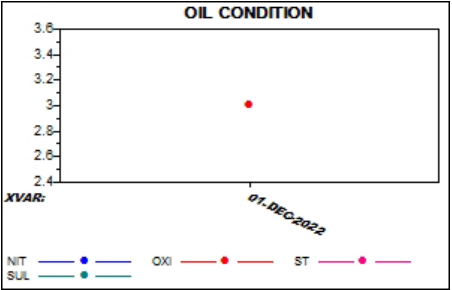
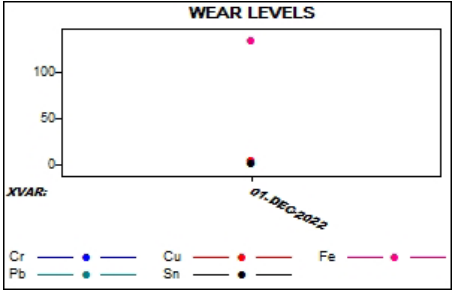
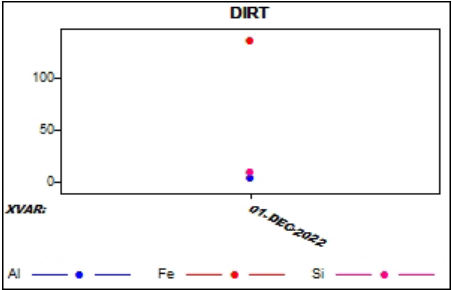
ISO	ISO Code Rating	23/17
6µ	6µ	44455
14µ	14µ	795

## FERROUS DEBRIS

PQI	PQ Index	104
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## VISUAL INSPECTION

DEP	DEP	A1
DEP2	DEP2	DEB



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>



## SWING DRIVE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-52336-0321

SHOP JOB NUM : 2w87751

SAMPLE SHIP TIME (days) : 1

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: nicholson

RECEIVED DATE: 02-Dec-22

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.  
TO DEVELOP A TREND.

Interp By: Barry Swindells

Interpreted On: 05-Dec-22

MORE SAMPLES NEEDED

## SAMPLE INFORMATION



Sampled Date	01-Dec-22
Sample Id	T010-52336-0321
Lab Date	02-Dec-22
Meter [Hr]	500
Meter On Fluid	500
Fluid Brand	CAT
Fluid Weight	
Fluid Type	FACTORY FILL
Fluid Change	U
Filter Change	NA
Total Fluid Added	0

## PREVIOUS SAMPLE

For additional sample history, go to: [my.cat.com](http://my.cat.com)

## CONDITION / CONTAMINATION

01-Dec-22

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 93.90

## INFRARED (UFM) ASTM E2412

OXI Oxidation 3

## WATER - HOTPLATE

W Water N

## WEAR LEVELS / ADDITIVES

01-Dec-22

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	0
Fe	Iron	59
Cr	Chromium	1
Al	Aluminum	1
Pb	Lead	0
Sn	Tin	0
Si	Silicon	6
Na	Sodium	3
K	Potassium	0
Mo	Molybdenum	0
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	1
Cd	Cadmium	0
Ca	Calcium	3022
P	Phosphorus	994
Zn	Zinc	1247
Mg	Magnesium	15
Ba	Barium	15
B	Boron	1

## CLEANLINESS

01-Dec-22

## PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406

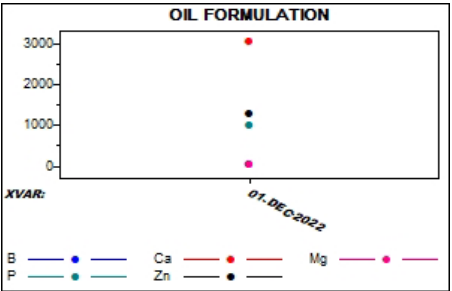
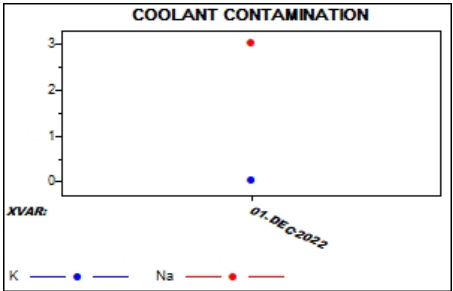
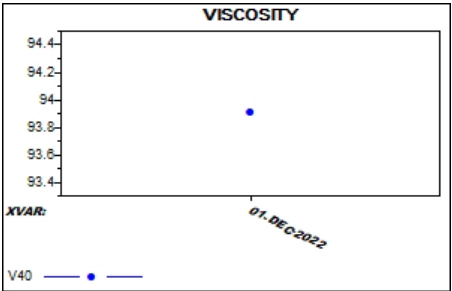
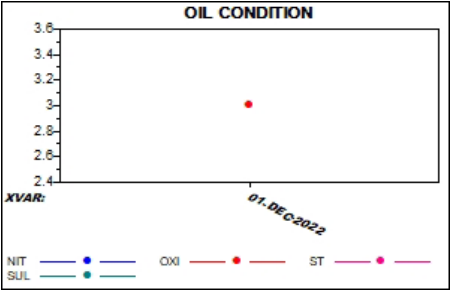
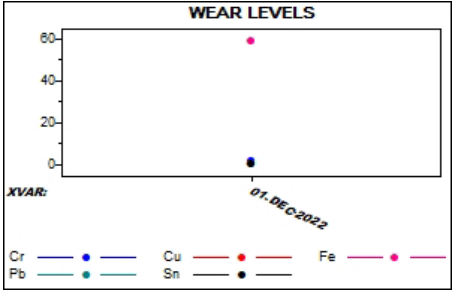
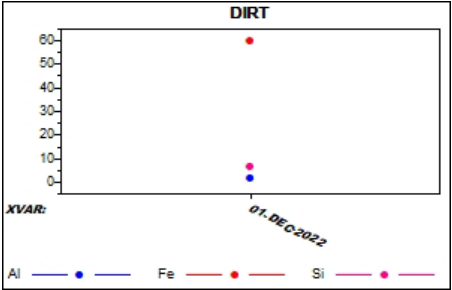
ISO	ISO Code Rating	22/15
6μ	6μ	28548
14μ	14μ	205

## FERROUS DEBRIS

PQI PQ Index 15

## VISUAL INSPECTION

DEP	DEP	N
DEP2	DEP2	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## ENGINE

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 22-Apr-23

T010-53107-0238

SHOP JOB NUM : wgi2304

SAMPLE SHIP TIME (days) : 6

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: NICHOLSON

RECEIVED DATE: 17-Apr-23

## SAMPLE INFORMATION

	11-Apr-23	01-Dec-22	12-Aug-22
Sample Id	T010-53107-0238	T010-52336-0245	T010-52229-0236
Lab Date	17-Apr-23	02-Dec-22	17-Aug-22
Meter [Hr]	0	500	224
Meter On Fluid	0	500	224
Fluid Brand	CAT	FACTORYFIL	FACTORYFIL
Fluid Weight		15W-40	15W-40
Fluid Type		DEO ULS	DEO ULS
Fluid Change	U	Y	N
Filter Change	U	Y	N
Total Fluid Added	0	0	0

## PREVIOUS SAMPLE

WEAR	LEVELS	REMAIN	SLIGHTLY	HIGH,	THIS	MAY	BE	ACCEPTABLE	FOR
ORIGINAL	FILL	OIL.	LEVELS	SHOULD	SETTLE	DOWN	AFTER	ONE	OR
CHANGES.	AS	THE	OIL	HAS	BEEN	CHANGED.	WE	WILL	MONITOR
OVER	THE	NEXT	FEW	SAMPLES.	ALL	OTHER	TEST	RESULTS	APPEAR
ACCEPTABLE.	RESAMPLE	IN	250 HOURS	TO	MONITOR.	MORE	SAMPLES	NEEDED	TO DEVELOP A TREND.

For additional sample history, go to:

[my.cat.com](https://my.cat.com)

## CONDITION / CONTAMINATION

	11-Apr-23	01-Dec-22	12-Aug-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V100 Viscosity at 100 C	12.38	11.36	11.35

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C	88.41	76.19	77.45
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## WEAR LEVELS / ADDITIVES

	11-Apr-23	01-Dec-22	12-Aug-22
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu Copper	3	12	11
Fe Iron	12	29	21
Cr Chromium	0	1	1
Al Aluminum	8	34	31
Pb Lead	0	0	0
Sn Tin	0	0	0
Si Silicon	4	7	6
Na Sodium	2	4	3
K Potassium	0	3	4
Mo Molybdenum	38	37	37
Ni Nickel	1	0	0
Ag Silver	0	0	0
Ti Titanium	0	0	0
V Vanadium	0	0	0
Mn Manganese	1	2	1
Cd Cadmium	0	0	0
Ca Calcium	1481	1527	1470
P Phosphorus	843	837	845
Zn Zinc	983	1013	1000
Mg Magnesium	415	440	433
Ba Barium	0	0	0
B Boron	43	39	54

## VISCOSITY INDEX

VI Viscosity Index	136	141	139
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## INFRARED (UFM) ASTM E2412

ST Soot	2	4	0
OXI Oxidation	21	20	20
SUL Sulfur Products	24	22	22
NIT Nitration	7	7	6

## WATER - HOTPLATE

W Water	N	N	N
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## FUEL DILUTION (SCREEN)

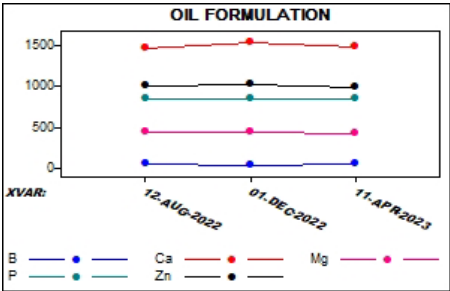
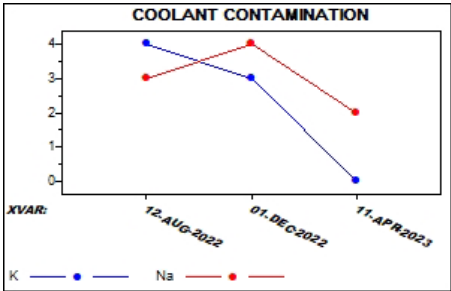
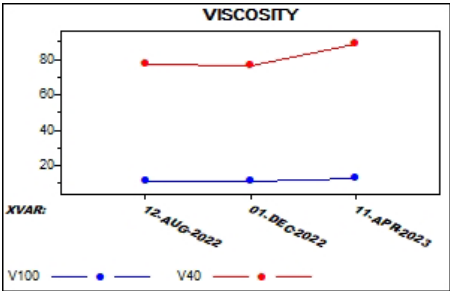
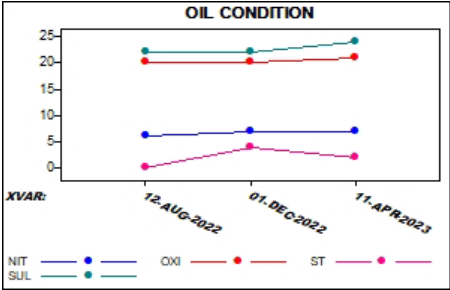
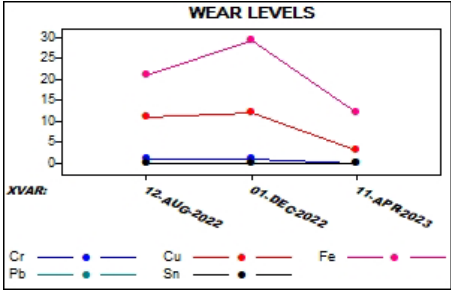
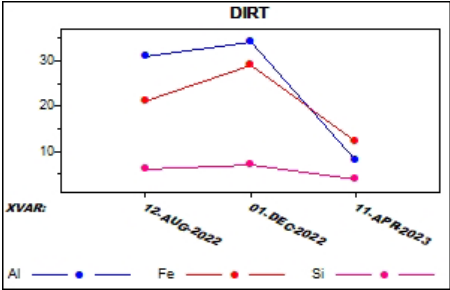
F Fuel	N	N	N
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## FUEL DILUTION (%) ASTM D7593

PFc Percent Fuel	<2	3.03	2.12
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## CLEANLINESS

	11-Apr-23	01-Dec-22	12-Aug-22
<b>FERROUS DEBRIS</b>			
PQI PQ Index	0	0	0



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJvUrs>

## RADIATOR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-53146-2018

SHOP JOB NUM : 2w88982

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: NICHOLSON

RECEIVED DATE: 26-May-23

CAT 323



No Action Required

COOLANT CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 31-May-23

## SAMPLE INFORMATION

Sampled Date	22-May-23	01-Dec-22
Sample Id	T010-53146-2018	T010-52336-2028
Lab Date	26-May-23	02-Dec-22
Meter [Hr]	1002	474
Meter On Fluid	1002	474
Fluid Brand		
Fluid Weight		
Fluid Type		
Fluid Change	N	U
Filter Change	N	U
Total Fluid Added	0	0

## PREVIOUS SAMPLE

COOLANT	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT	THE
RECOMMENDED INTERVAL.						

For additional sample history, go to: [my.cat.com](https://my.cat.com)

## ADDITIONAL CHARACTERISTICS

		22-May-23	01-Dec-22
ION CHROMATOGRAPHY (PPM) ASTM D4327			
CL	Chloride	9	6
SO4	Sulfate	123	58

## ADDITIONAL ANALYTES

TH	Total Hardness	4	2
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## REFRACTIVE INDEX

GL	Glycol (%)	50	49
FP	Freeze Point (°C)	-37	-36
BP	Boil Point (°C)	107	107

## pH

pH	pH	8.2	8.9
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## CONDUCTIVITY (µS/cm)

CON	Conductivity	3608	3644
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## PHYSICAL CHARACTERISTICS

		22-May-23	01-Dec-22
PHYSICALS			
Color	Color	red/light	orange
App	Appearance	clear	clear
Odor	Odor	ammonia	norm
Oil	Oil	none	none
Foam	Foam	norm	norm
PAmt	Precip Amount	trace	trace
PApp	Precip Appearance	granular	granular
PCol	Precip Color	brn/blk sol	brn/blk sol
PProp	Precip Property	non-mag	non-mag

## CORROSION LEVELS/ CHEMISTRY

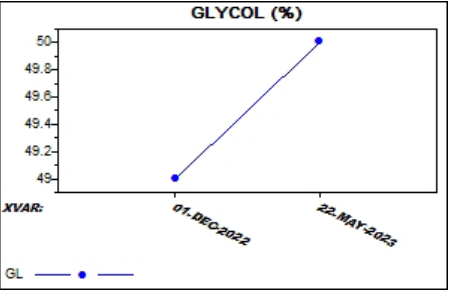
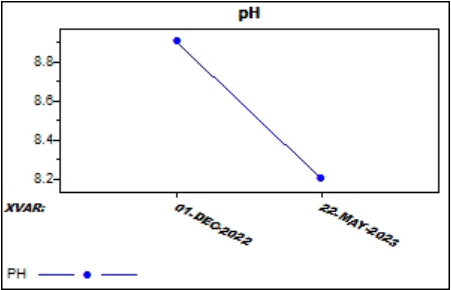
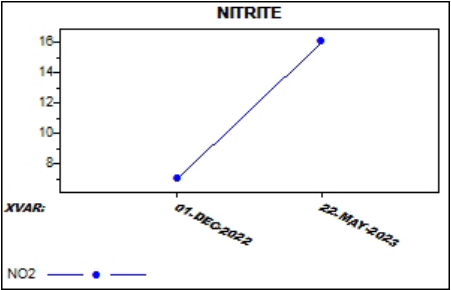
		22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	1	0
Fe	Iron	0	0
Pb	Lead	0	0
Sn	Tin	0	0
Al	Aluminum	1	0
Zn	Zinc	2	0
Na	Sodium	3318	3435
K	Potassium	184	68
Mo	Molybdenum	542	516

## ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	16	7
NO3	Nitrate	52	21
GLO	Glycolate	594	428

## ADDITIONAL ANALYTES

MoO4	Molybdate	903	861
BO3	Borate	0	19
SiO3	Silicate	23	19



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>

## HYDRAULIC SYSTEM

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

T010-53146-0310

SHOP JOB NUM : 2w88982

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: NICHOLSON

RECEIVED DATE: 26-May-23

CAT 323



No Action Required

Interp By: Barry Swindells

Interpreted On: 29-May-23

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION

Sampled Date	22-May-23	01-Dec-22
Sample Id	T010-53146-0310	T010-52336-0306
Lab Date	26-May-23	02-Dec-22
Meter [Hr]	1002	500
Meter On Fluid	1002	500
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	FACTORY FILL	
Fluid Change	N	U
Filter Change	N	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to: [my.cat.com](https://my.cat.com)

## CONDITION / CONTAMINATION

		22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	42.80	42.69

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	4	4
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## WEAR LEVELS / ADDITIVES

		22-May-23	01-Dec-22
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## ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]

Cu	Copper	8	7
Fe	Iron	9	7
Cr	Chromium	0	0
Al	Aluminum	0	0
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	1	0
Na	Sodium	3	3
K	Potassium	1	1
Mo	Molybdenum	0	0
Ni	Nickel	1	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	0	0
Cd	Cadmium	0	0
Ca	Calcium	162	162
P	Phosphorus	669	629
Zn	Zinc	826	827
Mg	Magnesium	1	1
Ba	Barium	1	1
B	Boron	1	1

## WATER - HOTPLATE

W	Water	N	N
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## CLEANLINESS

		22-May-23	01-Dec-22
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## PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406

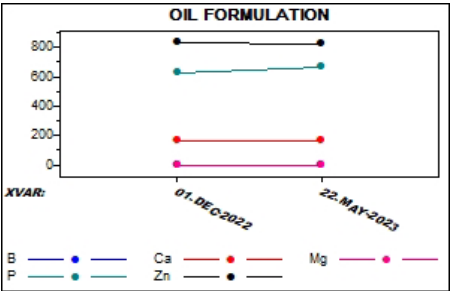
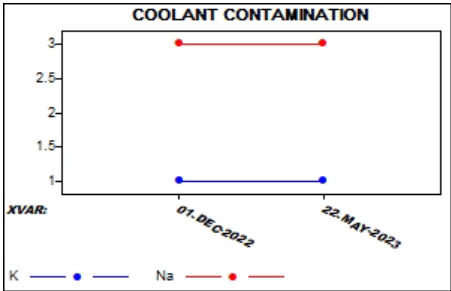
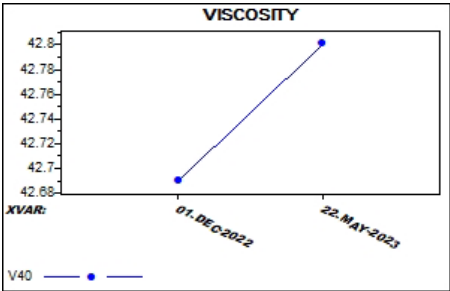
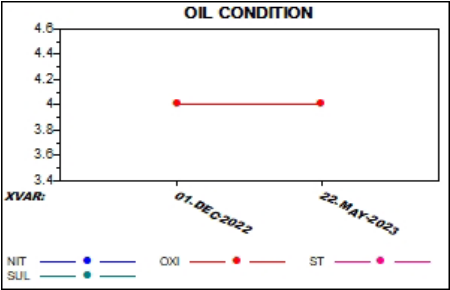
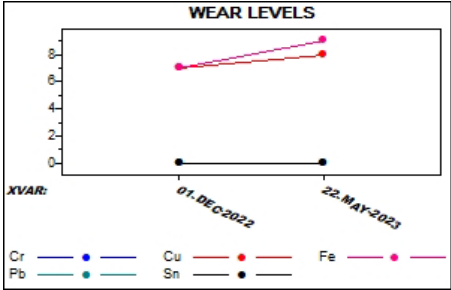
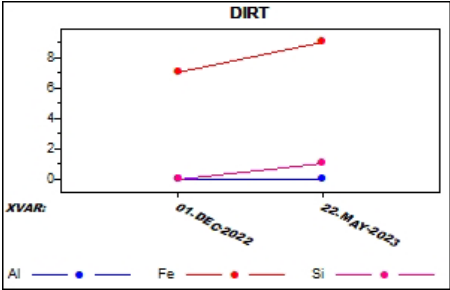
ISO	ISO Code Rating	19/17/13	20/17/11
4μ	4μ	4087	9975
6μ	6μ	792	667
14μ	14μ	49	16

## FERROUS DEBRIS

PQI	PQ Index	1	0
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## VISUAL INSPECTION

DEP	DEP	B1	N
DEP2	DEP2	DEB	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>





FINAL DRIVE REAR LEFT

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

CAT 323



No Action Required

Interp By: Barry Swindells  
Interpreted On: 29-May-23

T010-53146-0417  
SHOP JOB NUM : 2w88982  
SAMPLE SHIP TIME (days) : 4  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: NICHOLSON  
RECEIVED DATE: 26-May-23

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

SAMPLE INFORMATION

Sampled Date	22-May-23	01-Dec-22
Sample Id	T010-53146-0417	T010-52336-0322
Lab Date	26-May-23	02-Dec-22
Meter [Hr]	1002	500
Meter On Fluid	1002	500
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	FACTORY FILL	
Fluid Change	N	N
Filter Change	U	N
Total Fluid Added	0	0

PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to: [my.cat.com](https://my.cat.com)

CONDITION / CONTAMINATION

		22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445			
V40	Viscosity at 40 C	93.35	93.25
INFRARED (UFM) ASTM E2412			
OXI	Oxidation	3	3

WEAR LEVELS / ADDITIVES

		22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	4	2
Fe	Iron	404	113
Cr	Chromium	6	2
Al	Aluminum	3	2
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	17	11
Na	Sodium	6	5
K	Potassium	2	1
Mo	Molybdenum	0	0
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	1	0
V	Vanadium	0	0
Mn	Manganese	2	1
Cd	Cadmium	0	0
Ca	Calcium	3103	2904
P	Phosphorus	1052	954
Zn	Zinc	1298	1201
Mg	Magnesium	15	14
Ba	Barium	14	13
B	Boron	1	1

WATER - HOTPLATE

W	Water	N	N
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CLEANLINESS

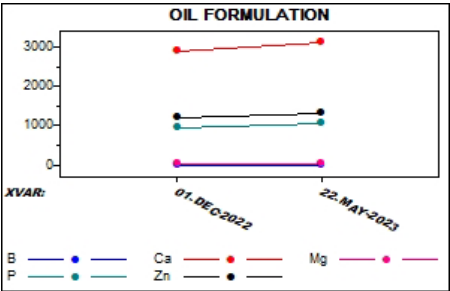
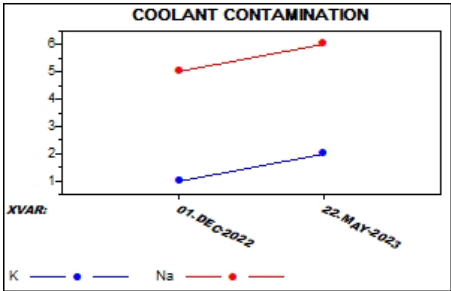
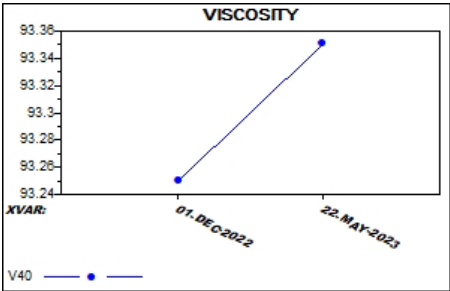
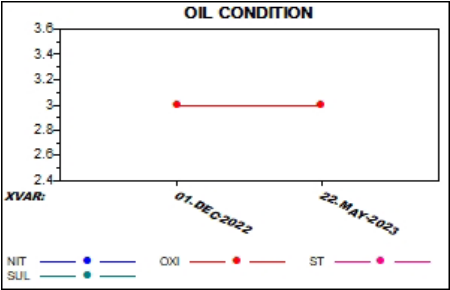
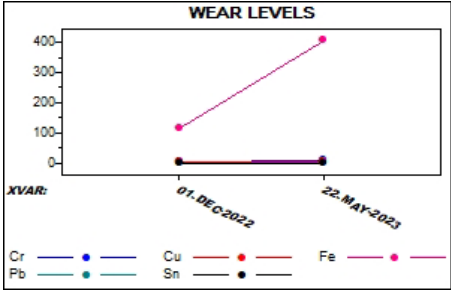
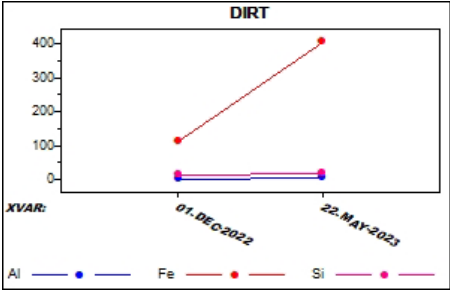
		22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406			
ISO	ISO Code Rating	22/16	23/17
6µ	6µ	25893	52692
14µ	14µ	423	931

FERROUS DEBRIS

PQI	PQ Index	370	90
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VISUAL INSPECTION

DEP	DEP	N	N
DEP2	DEP2	N	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>

## FINAL DRIVE REAR

EQUIP NUM: E16

SERIAL NUMBER: LTN10065

## RIGHT

CAT 323



No Action Required

Interp By: Barry Swindells

Interpreted On: 29-May-23

T010-53146-0418

SHOP JOB NUM : 2w88982

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: NICHOLSON

RECEIVED DATE: 26-May-23

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION

Sampled Date	22-May-23	01-Dec-22
Sample Id	T010-53146-0418	T010-52336-0323
Lab Date	26-May-23	02-Dec-22
Meter [Hr]	1002	500
Meter On Fluid	1002	500
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	FACTORY FILL	
Fluid Change	N	N
Filter Change	N	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[my.cat.com](https://my.cat.com)

## CONDITION / CONTAMINATION

		22-May-23	01-Dec-22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	93.08	93.15

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	3	3
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## WEAR LEVELS / ADDITIVES

		22-May-23	01-Dec-22
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu	Copper	5	2
Fe	Iron	311	134
Cr	Chromium	5	2
Al	Aluminum	2	2
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	12	8
Na	Sodium	7	6
K	Potassium	4	2
Mo	Molybdenum	1	0
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	1	0
V	Vanadium	0	0
Mn	Manganese	2	1
Cd	Cadmium	0	0
Ca	Calcium	3206	3022
P	Phosphorus	1074	988
Zn	Zinc	1332	1252
Mg	Magnesium	15	15
Ba	Barium	35	32
B	Boron	1	1

## WATER - HOTPLATE

W	Water	N	N
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## CLEANLINESS

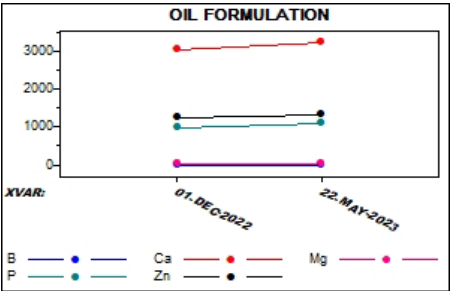
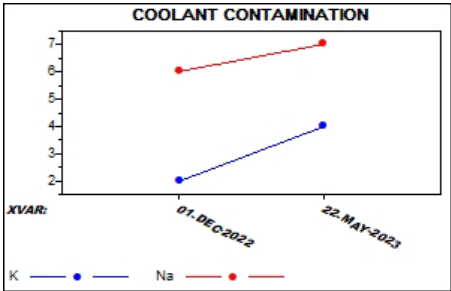
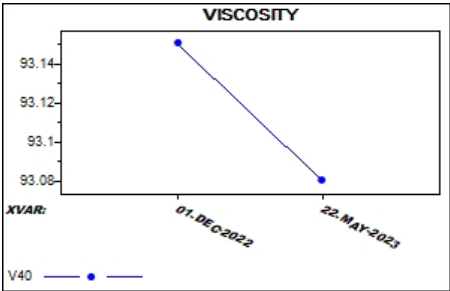
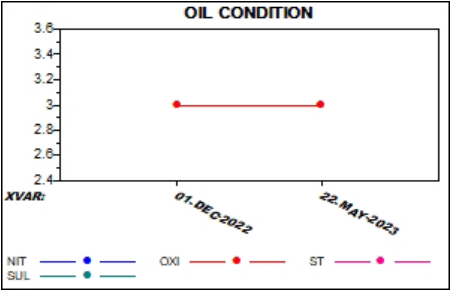
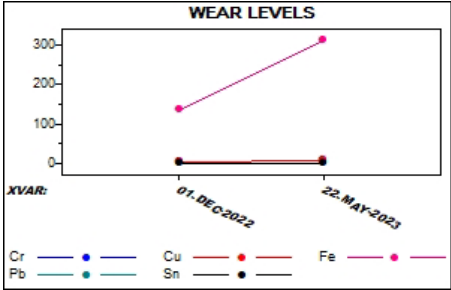
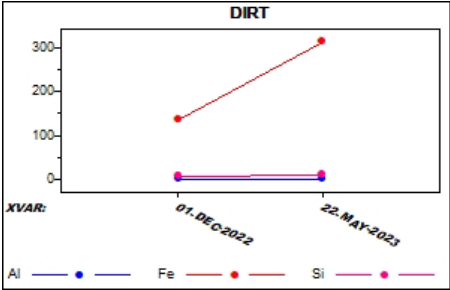
		22-May-23	01-Dec-22
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>			
ISO	ISO Code Rating	22/16	23/17
6μ	6μ	26537	44455
14μ	14μ	538	795

## FERROUS DEBRIS

PQI	PQ Index	260	104
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## VISUAL INSPECTION

DEP	DEP	N	A1
DEP2	DEP2	N	DEB



Report Comment

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>



SWING DRIVE

EQUIP NUM: E16  
CAT 323  
SERIAL NUMBER: LTN10065

T010-53146-0419  
SHOP JOB NUM : 2w88982  
SAMPLE SHIP TIME (days) : 4  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: NICHOLSON  
RECEIVED DATE: 26-May-23



No Action Required

Interp By: Barry Swindells  
Interpreted On: 29-May-23

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

SAMPLE INFORMATION

Sampled Date	22-May-23	01-Dec-22
Sample Id	T010-53146-0419	T010-52336-0321
Lab Date	26-May-23	02-Dec-22
Meter [Hr]	1002	500
Meter On Fluid	1002	500
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	FACTORY FILL	
Fluid Change	Y	U
Filter Change	N	NA
Total Fluid Added	0	0

PREVIOUS SAMPLE

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to: [my.cat.com](https://my.cat.com)

CONDITION / CONTAMINATION

		22-May-23	01-Dec-22
VISCOSITY (CENTISTOKES) ASTM D445			
V40	Viscosity at 40 C	93.50	93.90
INFRARED (UFM) ASTM E2412			
OXI	Oxidation	3	3

WEAR LEVELS / ADDITIVES

		22-May-23	01-Dec-22
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	0	0
Fe	Iron	71	59
Cr	Chromium	1	1
Al	Aluminum	1	1
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	7	6
Na	Sodium	4	3
K	Potassium	1	0
Mo	Molybdenum	0	0
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	1	1
Cd	Cadmium	0	0
Ca	Calcium	3176	3022
P	Phosphorus	1061	994
Zn	Zinc	1318	1247
Mg	Magnesium	16	15
Ba	Barium	17	15
B	Boron	1	1

WATER - HOTPLATE

W	Water	N	N
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CLEANLINESS

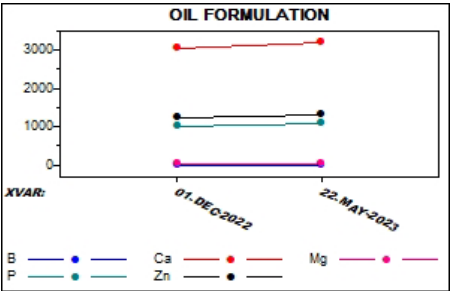
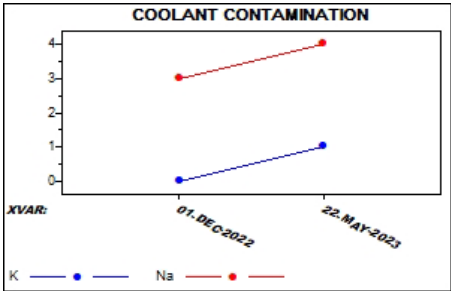
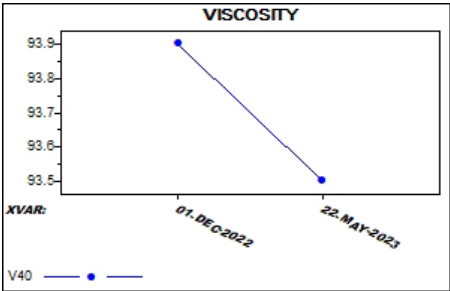
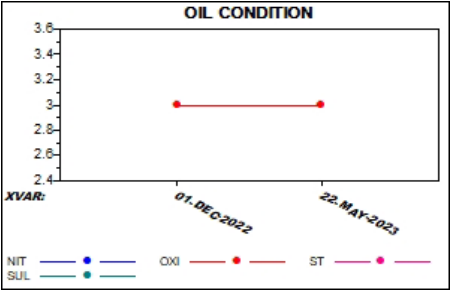
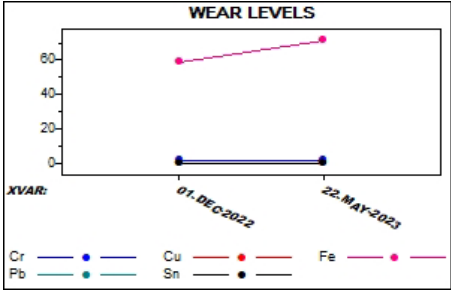
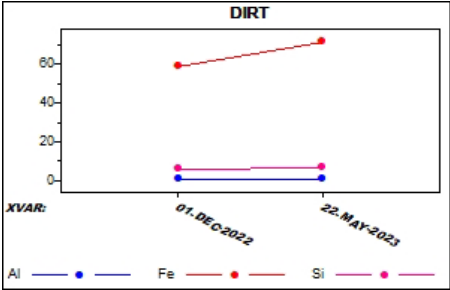
		22-May-23	01-Dec-22
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406			
ISO	ISO Code Rating	20/15	22/15
6µ	6µ	9711	28548
14µ	14µ	226	205

FERROUS DEBRIS

PQI	PQ Index	16	15
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VISUAL INSPECTION

DEP	DEP	B1	N
DEP2	DEP2	DEB	N



**Report Comment**

Our sample reports has been updated! For more information on the new report, go to - <https://www.youtube.com/watch?v=4h8bREJVUrs>