

## FINAL DRIVE REAR

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

## RIGHT

CAT D8T



No Action Required

Interp By: Barry Swindells

Interpreted On: 11-Apr-24

T010-54101-0138

LABEL#: 5

SHOP JOB NUM : 8W37595

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 10-Apr-24

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

## SAMPLE INFORMATION



Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54101-0138	T010-54031-0136	T010-53312-0536	T010-53090-7916
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	7058.0	6516.0	5992.0	5496
Comp Meter [Hr]	7058.0	6515.0		
Meter On Fluid	1066.0	524.0	1985.0	1489
Fluid Brand	CAT	CAT	CAT	
Fluid Weight	60	60	60	
Fluid Type	FDAO	FDAO	FDAO	
Fluid Change	N	N	Y	N
Filter Change	N	N	NA	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

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40 Viscosity at 40 C	299.8	303.0	146.9	156.6

## INFRARED (UFM) ASTM E2412

OXI Oxidation	8	9	7	7
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## WATER - HOTPLATE

W Water	N	N	N	N
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## WEAR LEVELS / ADDITIVES

06-Apr-24 28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu Copper	0	0	0	0
Fe Iron	36	24	32	14
Cr Chromium	1	0	1	0
Al Aluminum	0	0	1	1
Pb Lead	0	1	0	0
Sn Tin	0	0	0	0
Si Silicon	5	5	22	25
Na Sodium	4	3	1	1
K Potassium	2	2	1	1
Mo Molybdenum	0	0	1	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	1	0	1	0
Cd Cadmium	0	0	0	0
Ca Calcium	488	440	3087	3019
P Phosphorus	273	263	759	790
Zn Zinc	110	92	1016	976
Mg Magnesium	6	6	31	30
Ba Barium	0	0	0	0
B Boron	69	67	12	11

## CLEANLINESS

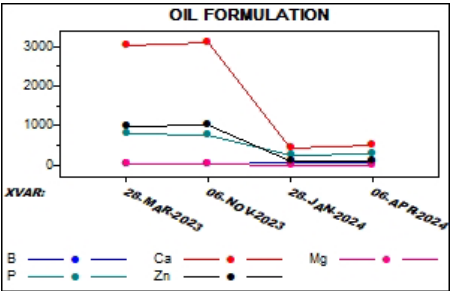
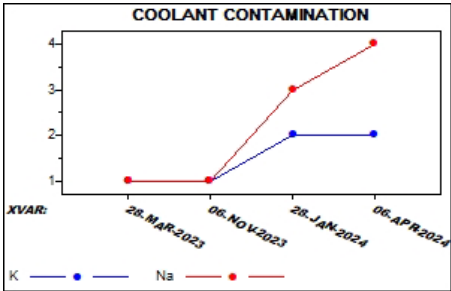
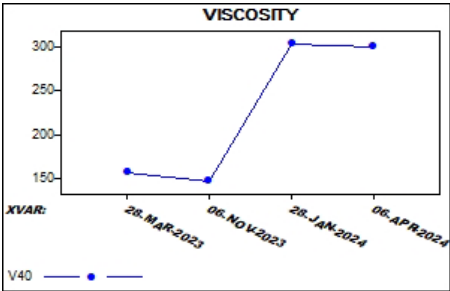
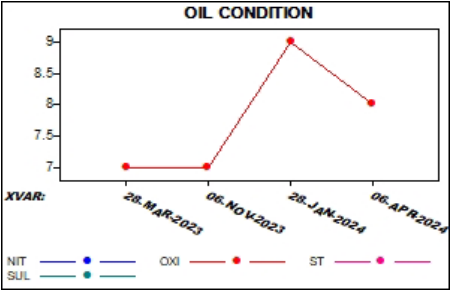
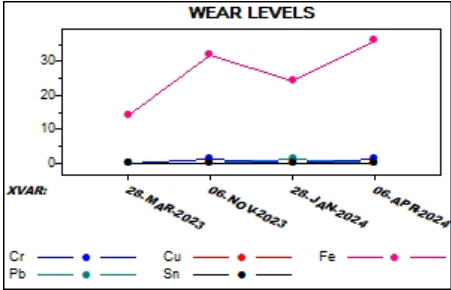
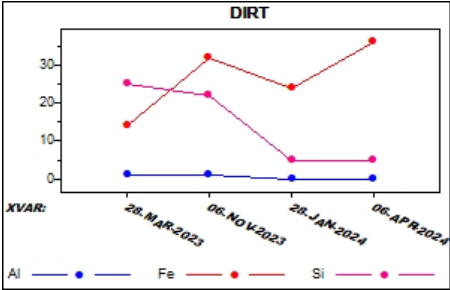
	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>				
ISO ISO Code Rating	19/13	19/17	20/14	21/16
6µ 6µ	2988	3304	6967	13842
14µ 14µ	60	738	94	556

## FERROUS DEBRIS

PQI PQ Index	8	4	6	2
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## VISUAL INSPECTION

DEP DEP	N	N	N	N
DEP2 DEP2	N	N	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>

## TRANSMISSION POWER

## SHIFT

T010-54101-0113

LABEL#: 6

SHOP JOB NUM : 8W37595

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 10-Apr-24

EQUIP NUM: D3

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

Interpreted On: 11-Apr-24

## SAMPLE INFORMATION

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54101-0113	T010-54031-0316	T010-53312-0523	T010-53090-0116
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	7058.0	6516.0	5992.0	5496
Comp Meter [Hr]	7058.0	6515.0		
Meter On Fluid	1066.0	524.0	1003.0	
Fluid Brand	CAT	CAT	CAT	
Fluid Weight	30	30	30	
Fluid Type	TDTO	TDTO	TDTO	
Fluid Change	Y	N	Y	N
Filter Change	Y	Y	Y	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

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40 Viscosity at 40 C	91.04	89.94	82.71	83.34

## INFRARED (UFM) ASTM E2412

OXI Oxidation	5	5	6	6
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## WATER - HOTPLATE

W Water	N	N	N	N
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## WEAR LEVELS / ADDITIVES

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>				
Cu Copper	1	1	1	1
Fe Iron	7	6	9	4
Cr Chromium	0	0	0	0
Al Aluminum	1	1	1	1
Pb Lead	0	0	0	0
Sn Tin	0	0	0	0
Si Silicon	3	3	6	6
Na Sodium	3	1	2	1
K Potassium	1	0	0	0
Mo Molybdenum	0	0	1	1
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	0	0
Cd Cadmium	0	0	0	0
Ca Calcium	3017	2924	3203	2947
P Phosphorus	960	868	842	853
Zn Zinc	1167	1153	1100	1005
Mg Magnesium	23	24	63	59
Ba Barium	0	0	0	0
B Boron	12	11	35	35

## CLEANLINESS

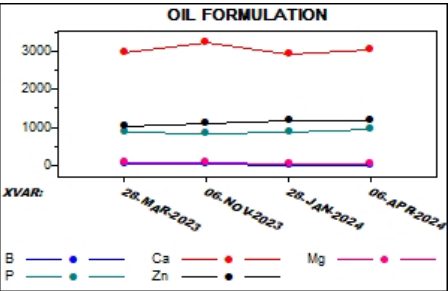
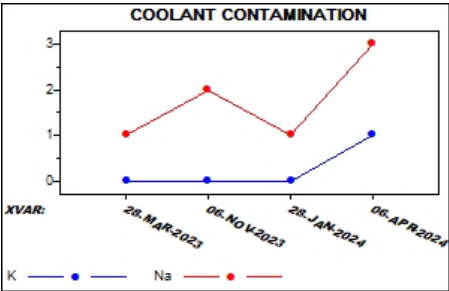
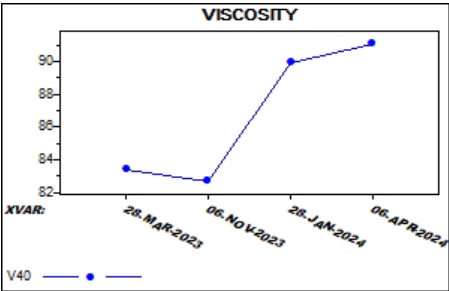
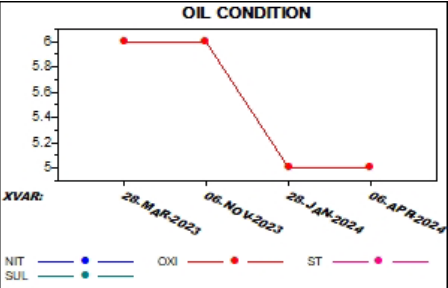
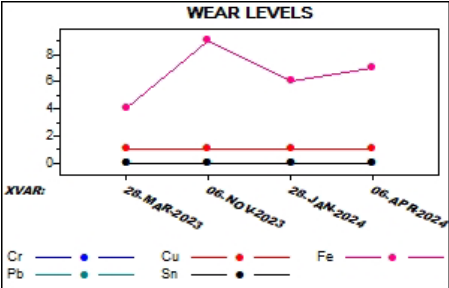
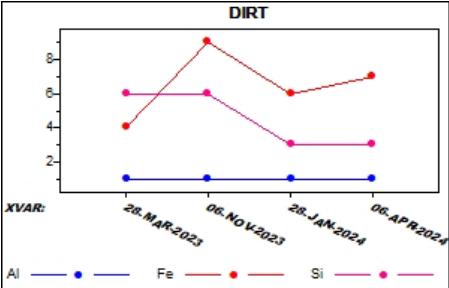
	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>				
ISO ISO Code Rating	18/16/12	19/16/13	19/14/10	18/17/16
4µ 4µ	1957	2819	2542	2225
6µ 6µ	418	374	109	730
14µ 14µ	27	45	10	377

## FERROUS DEBRIS

PQI PQ Index	0	0	0	0
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## VISUAL INSPECTION

DEP DEP	N	N	N	N
DEP2 DEP2	N	N	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>

## ENGINE

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-54214-0244

SHOP JOB NUM : WGI2407

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Mount Beauty

RECEIVED DATE: 01-Aug-24

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 05-Aug-24

## SAMPLE INFORMATION



	29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24
Sample Id	T010-54214-0244	T010-54101-0246	T010-54066-0224	T010-54031-0208
Lab Date	01-Aug-24	10-Apr-24	06-Mar-24	31-Jan-24
Meter [Hr]	7357.0	7058.0	6789	6516.0
Comp Meter [Hr]		7058.0	6789	6515.0
Meter On Fluid	299.0	542.0	273.0	524.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO ULS	DEO ULS	DEO ULS	DEO-ULS(CJ-4)
Fluid Change	N	Y	N	Y
Filter Change	N	Y	N	Y
Total Fluid Added	0	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

		29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.18	12.21	12.22	12.50
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	85.21	85.17	86.37	88.46

## VISCOSITY INDEX

VI	Viscosity Index	138	138	136	137
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## INFRARED (UFM) ASTM E2412

ST	Soot	10	22	12	25
OXI	Oxidation	21	22	21	23
SUL	Sulfur Products	25	25	25	27
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
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## FUEL DILUTION (%) ASTM D7593

PFc	Percent Fuel	2.99	3.55	2.34	3.35
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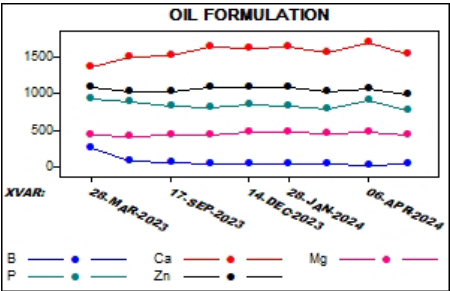
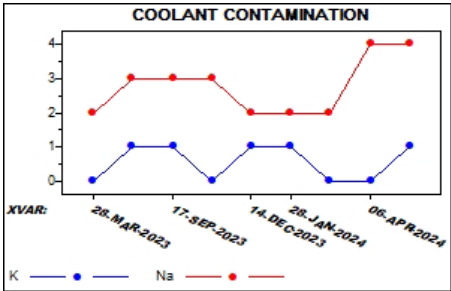
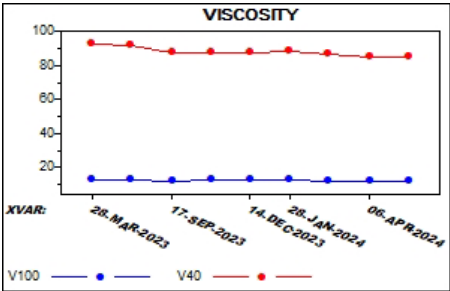
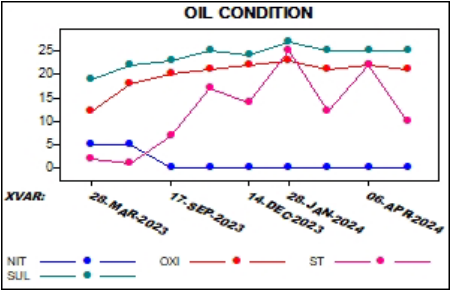
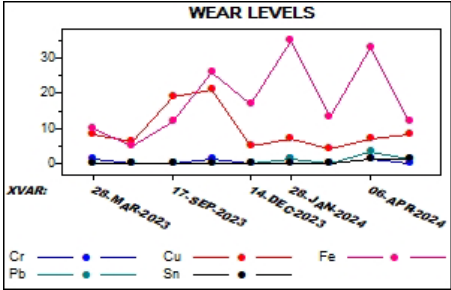
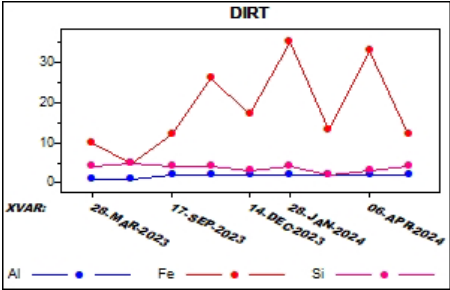
## CLEANLINESS

		29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0

## WEAR LEVELS / ADDITIVES

29-Jul-24 06-Apr-24 01-Mar-24 28-Jan-24

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	8	7	4	7
Fe	Iron	12	33	13	35
Cr	Chromium	0	1	0	1
Al	Aluminum	2	2	2	2
Pb	Lead	1	3	0	1
Sn	Tin	1	1	0	0
Si	Silicon	4	3	2	4
Na	Sodium	4	4	2	2
K	Potassium	1	0	0	1
Mo	Molybdenum	38	37	37	39
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	0	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1544	1686	1565	1639
P	Phosphorus	778	918	794	825
Zn	Zinc	995	1068	1037	1089
Mg	Magnesium	445	485	459	482
Ba	Barium	0	0	0	0
B	Boron	48	36	44	40



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: D3

SERIAL NUMBER: JJ501379

T010-55163-2022

LABEL#: 258767381

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

CAT D8T



Monitor Compartment

WEAR LEVELS APPEAR SLIGHTLY HIGH, SOME LIGHT FOAMING. CHECK RADIATOR FINNS ARE FREE OF DUST & COOLANT LEVELS INCLUDING OVERFLOW TANK ARE FILLED TO CORRECT LEVELS. ENSURE COOLING SYSTEM IS OPERATING ACCORDING MANUFACTURERS SPECIFICATION. WE WILL CONTINUE TO MONITOR COOLANT CONDITION. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. RECOMMEND DOSING WITH 0.07% SYSTEM CAPACITY ALUMINIUM COMPONENT CONDITIONER (Part No.369-0805) WHICH REDUCES ODOURS AND ASSISTS IN MAINTAINING ADDITIVE LEVELS BY PASSIVATING ALUMINIUM SURFACES. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

Interp By: Barry Swindells

Interpreted On: 20-Jun-25

SAMPLE INFORMATION



	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sample Id	T010-55163-2022	T010-54101-2012	T010-54031-2009	T010-53312-2043
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23
Meter [Hr]	7487	7058.0	6516.0	5992.0
Comp Meter [Hr]		7058.0	6515.0	
Meter On Fluid		7058.0	6516.0	5992.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight				
Fluid Type	ELC ADVANCED	ELC ADVANCED	ELC ADVANCED	ELC ADVANCED
Fluid Change	N	N	N	N
Filter Change	N	N	N	NA
Total Fluid Added	0	0	0	0

CORROSION LEVELS/ CHEMISTRY

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	14	14	21	32
Fe	Iron	12	12	14	14
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Al	Aluminum	10	7	8	7
Zn	Zinc	6	5	8	11
Na	Sodium	3570	3680	3544	3290
K	Potassium	279	267	307	313
Mo	Molybdenum	547	483	502	496

ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	511	638	619	200
NO3	Nitrate	270	227	302	157
GLO	Glycolate	873	748	603	1324

ADDITIONAL ANALYTES

MoO4	Molybdate	912	805	837	826
BO3	Borate	0	3	3	1
SiO3	Silicate	46	41	46	47

PREVIOUS SAMPLE

LIGHT QUANTITY OF OIL IDENTIFIED IN SAMPLE, WEAR LEVELS REMAIN HIGH, WAS A SAMPLING GUN USED FOR THE OIL SAMPLES USED TO SAMPLE THIS COOLANT AS WELL? ENSURE SAMPLING PUMP IS CLEAN FREE FROM OIL AND DEBRIS. ENSURE CORRECT SAMPLING TECHNIQUE IS FOLLOWED TO AVOID MISLEADING RESULTS. RESAMPLE AT THE NEXT ENGINE SERVICE.

For additional sample history, go to:

[S.O.S WEB](#)

ADDITIONAL CHARACTERISTICS

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
ION CHROMATOGRAPHY (PPM) ASTM D4327					
CL	Chloride	57	60	70	73
SO4	Sulfate	51	49	53	64

ADDITIONAL ANALYTES

TH	Total Hardness	22	21	23	27
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REFRACTIVE INDEX

GL	Glycol (%)	50	46	45	45
FP	Freeze Point (°C)	-37	-32	-31	-31
BP	Boil Point (°C)	107	106	106	106

pH

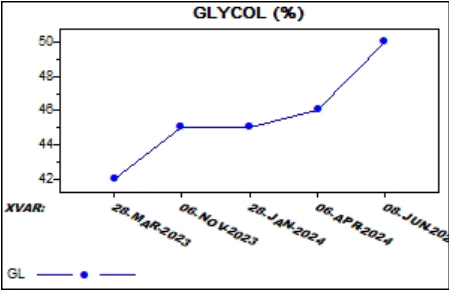
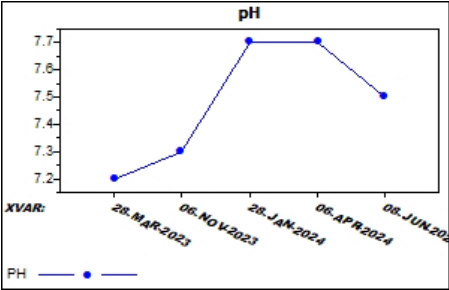
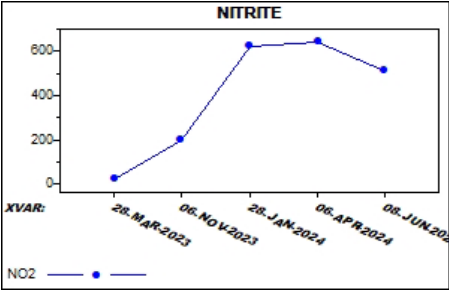
pH	pH	7.5	7.7	7.7	7.3
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CONDUCTIVITY (µS/cm)

CON	Conductivity	4453	4481	3467	3553
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PHYSICAL CHARACTERISTICS

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
PHYSICALS					
Color	Color	orange	red	red	red
App	Appearance	clear	clear	clear	clear
Odor	Odor	norm	norm	norm	norm
Oil	Oil	none	light	none	none
Foam	Foam	light	norm	norm	norm
PAmt	Precip Amount	none	trace	trace	trace
PApp	Precip Appearance	N/A	granular	granular	granular
PCol	Precip Color	N/A	blk sol	blk sol	blk sol
PProp	Precip Property	N/A	non-mag	non-mag	non-mag



**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](http://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.



## HYDRAULIC SYSTEM

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-55163-0108

LABEL#: 258853297

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

CAT D8T



## Monitor Compartment

SILICON AND ALUMINIUM ARE SLIGHTLY HIGH. THE SILICON AND ALUMINIUM INDICATE SLIGHT DIRT ENTRY. THE OIL VISCOSITY @40C IS HIGHER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. MONITOR COMPARTMENT FOR RISING OIL LEVEL. SUGGEST CUT OPEN FILTER(S) AND INSPECT FOR DEBRIS. 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 .

Interp By: Barry Swindells

Interpreted On: 16-Jun-25

## SAMPLE INFORMATION



	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sample Id	T010-55163-0108	T010-54101-0723	T010-54031-0114	T010-53312-0517
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23
Meter [Hr]	7487	7058.0	6516.0	5992.0
Comp Meter [Hr]		7058.0	6515.0	
Meter On Fluid		1066.0	524.0	1985.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	10W	10W	10W	10W
Fluid Type	HYDO ADVANCED	HYDO ADVANCED	HYDO ADVANCED	HYDO ADVANCED
Fluid Change	N	N	N	Y
Filter Change	N	Y	N	Y
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

SILICON AND ALUMINIUM ARE SLIGHTLY HIGH. CHECK FILTER MEDIUM AND SCREENS FOR WEAR MATERIAL AND CONTAMINATION. 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

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	52.10	53.39	53.68	63.33

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	5	5	5	6
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## WEAR LEVELS / ADDITIVES

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>					
Cu	Copper	14	11	10	13
Fe	Iron	21	16	12	14
Cr	Chromium	1	1	1	1
Al	Aluminum	17	12	8	8
Pb	Lead	1	1	1	1
Sn	Tin	1	0	0	0
Si	Silicon	36	28	22	29
Na	Sodium	2	3	2	3
K	Potassium	4	3	3	3
Mo	Molybdenum	12	10	10	18
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	1	0	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	794	707	678	1020
P	Phosphorus	712	609	557	583
Zn	Zinc	887	769	755	764
Mg	Magnesium	185	165	157	253
Ba	Barium	0	0	0	0
B	Boron	41	37	37	58

## WATER - HOTPLATE

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

## CLEANLINESS

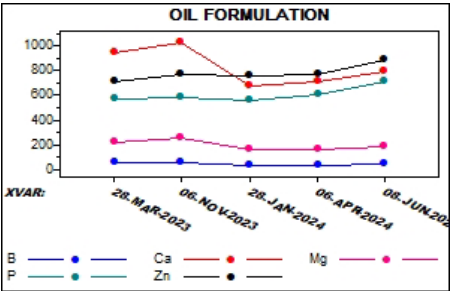
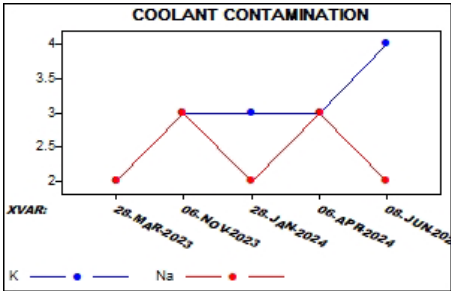
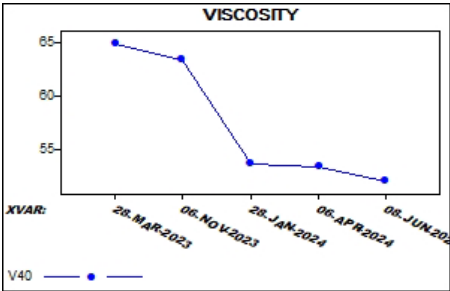
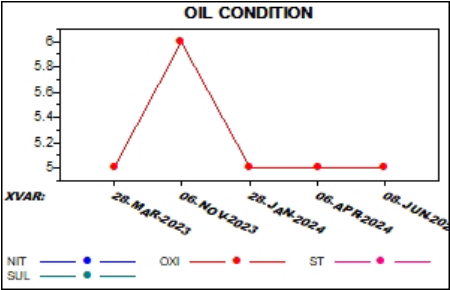
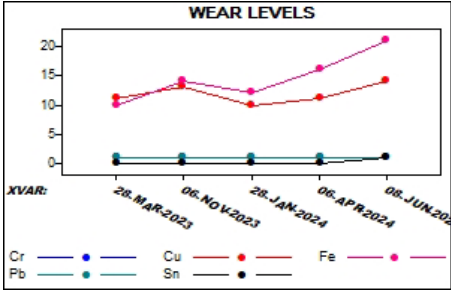
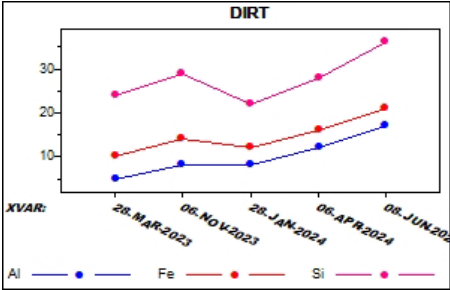
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>					
ISO	ISO Code Rating	17/13/10	17/12/9	19/14/11	20/13/10
4µ	4µ	1235	1130	3291	7239
6µ	6µ	59	40	127	73
14µ	14µ	7	3	11	7

## FERROUS DEBRIS

PQI	PQ Index	0	0	0	0
-----	----------	---	---	---	---

## VISUAL INSPECTION

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



Report Comment

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## TRANSMISSION POWER

## SHIFT

T010-55163-0120

LABEL#: 258853847

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

EQUIP NUM: D3

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

Interpreted On: 16-Jun-25

## SAMPLE INFORMATION

	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sample Id	T010-55163-0120	T010-54101-0113	T010-54031-0316	T010-53312-0523
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23
Meter [Hr]	7487	7058.0	6516.0	5992.0
Comp Meter [Hr]		7058.0	6515.0	
Meter On Fluid		1066.0	524.0	1003.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	30	30	30	30
Fluid Type	TDTO	TDTO	TDTO	TDTO
Fluid Change	N	Y	N	Y
Filter Change	Y	Y	Y	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

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V40	Viscosity at 40 C	92.67	91.04	89.94	82.71

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	4	5	5	6
-----	-----------	---	---	---	---

## WATER - HOTPLATE

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

## CLEANLINESS

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>					
ISO	ISO Code Rating	16/14/11	18/16/12	19/16/13	19/14/10
4µ	4µ	632	1957	2819	2542
6µ	6µ	81	418	374	109
14µ	14µ	14	27	45	10

## FERROUS DEBRIS

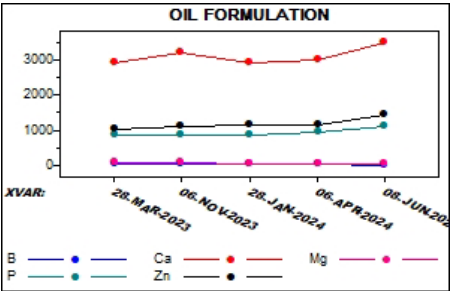
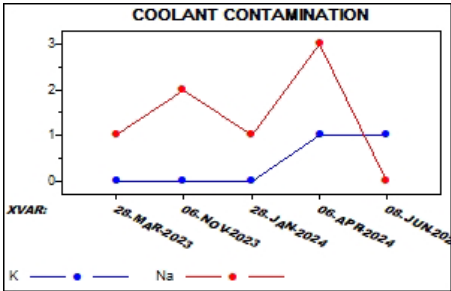
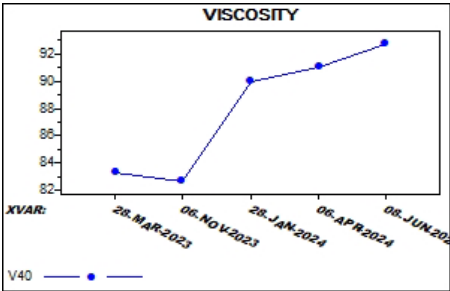
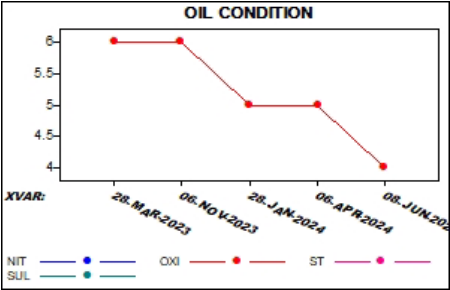
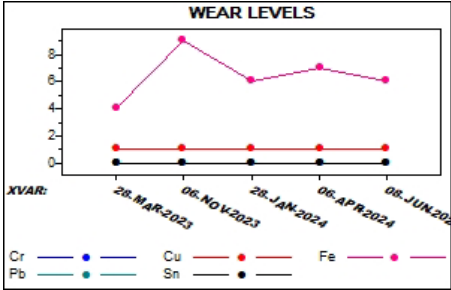
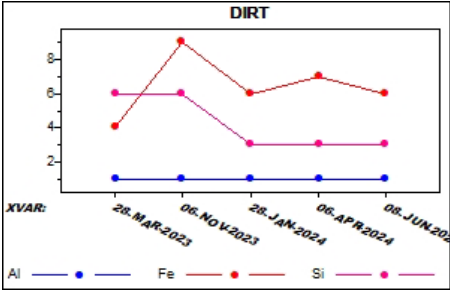
PQI	PQ Index	0	0	0	0
-----	----------	---	---	---	---

## VISUAL INSPECTION

DEP	DEP	N	N	N	N
DEP2	DEP2	N	N	N	N

## WEAR LEVELS / ADDITIVES

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>					
Cu	Copper	1	1	1	1
Fe	Iron	6	7	6	9
Cr	Chromium	0	0	0	0
Al	Aluminum	1	1	1	1
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	3	3	3	6
Na	Sodium	0	3	1	2
K	Potassium	1	1	0	0
Mo	Molybdenum	0	0	0	1
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	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	3490	3017	2924	3203
P	Phosphorus	1087	960	868	842
Zn	Zinc	1428	1167	1153	1100
Mg	Magnesium	16	23	24	63
Ba	Barium	0	0	0	0
B	Boron	5	12	11	35



Report Comment

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## ENGINE

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-55163-0237

LABEL#: 258854384

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells

Interpreted On: 16-Jun-25

## SAMPLE INFORMATION

	08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24
Sample Id	T010-55163-0237	T010-54214-0244	T010-54101-0246	T010-54066-0224
Lab Date	12-Jun-25	01-Aug-24	10-Apr-24	06-Mar-24
Meter [Hr]	7487	7357.0	7058.0	6789
Comp Meter [Hr]			7058.0	6789
Meter On Fluid		299.0	542.0	273.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO ULS	DEO ULS	DEO ULS	DEO ULS
Fluid Change	Y	N	Y	N
Filter Change	Y	N	Y	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

		08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V100	Viscosity at 100 C	11.92	12.18	12.21	12.22
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V40	Viscosity at 40 C	83.52	85.21	85.17	86.37

## VISCOSITY INDEX

VI	Viscosity Index	136	138	138	136
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## INFRARED (UFM) ASTM E2412

ST	Soot	17	10	22	12
OXI	Oxidation	20	21	22	21
SUL	Sulfate By-Product	23	25	25	25
	Sulfur Products	23	25	25	25
NIT	Nitration	0	0	0	0

## WATER - HOTPLATE

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

## FUEL DILUTION (SCREEN)

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

## FUEL DILUTION (%) ASTM D7593

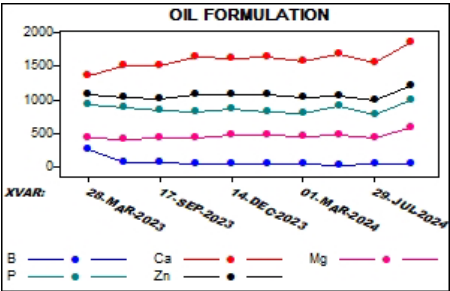
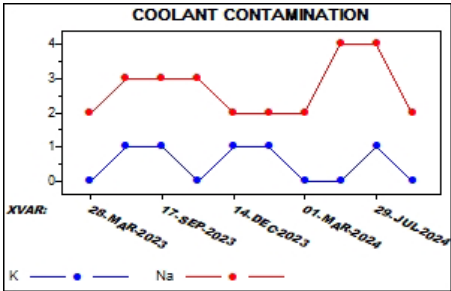
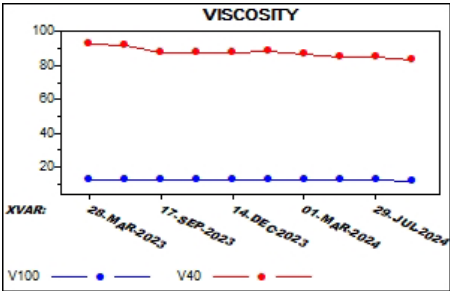
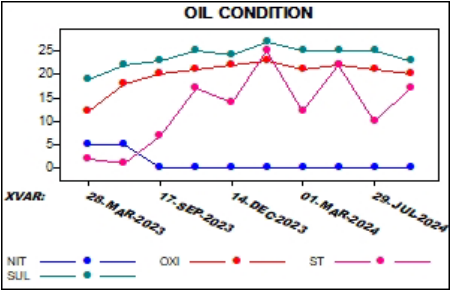
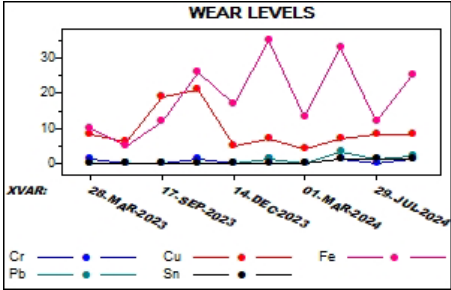
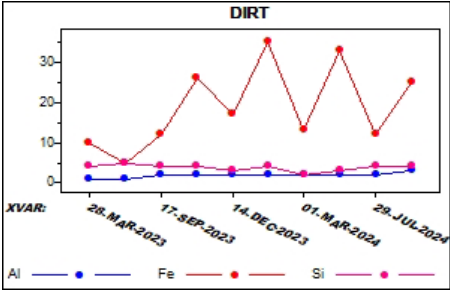
PFc	Percent Fuel	4.14	2.99	3.55	2.34
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## CLEANLINESS

		08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24
<b>FERROUS DEBRIS</b>					
PQI	PQ Index	0	0	0	0

## WEAR LEVELS / ADDITIVES

		08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>					
Cu	Copper	8	8	7	4
Fe	Iron	25	12	33	13
Cr	Chromium	1	0	1	0
Al	Aluminum	3	2	2	2
Pb	Lead	2	1	3	0
Sn	Tin	1	1	1	0
Si	Silicon	4	4	3	2
Na	Sodium	2	4	4	2
K	Potassium	0	1	0	0
Mo	Molybdenum	46	38	37	37
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	1	0	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	1844	1544	1686	1565
P	Phosphorus	1001	778	918	794
Zn	Zinc	1205	995	1068	1037
Mg	Magnesium	581	445	485	459
Ba	Barium	0	0	0	0
B	Boron	53	48	36	44



Report Comment

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## FINAL DRIVE REAR LEFT

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-55163-0429

LABEL#: 258854198

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

CAT D8T



## Monitor Compartment

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. AFTER INSPECTION & SERVICE RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

Interp By: Barry Swindells

Interpreted On: 17-Jun-25

## SAMPLE INFORMATION



	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sample Id	T010-55163-0429	T010-54101-0139	T010-54031-0135	T010-53312-0535
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23
Meter [Hr]	7487	7058.0	6516.0	5992.0
Comp Meter [Hr]		7058.0	6515.0	
Meter On Fluid		1066.0	524.0	1985.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	60	60	60	60
Fluid Type	FDAO	FDAO	FDAO	FDAO
Fluid Change	N	N	N	Y
Filter Change	N	N	U	NA
Total Fluid Added	0	0	0	0

## PREVIOUS SAMPLE

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY . WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. RECOMMEND CHANGING OIL TO FLUSH THE COMPARTMENT. AFTER INSPECTION & SERVICE RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40 Viscosity at 40 C	206.5	220.6	268.7	153.2

## WEAR LEVELS / ADDITIVES

	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>				
Cu Copper	0	0	0	0
Fe Iron	46	34	24	36
Cr Chromium	1	0	0	0
Al Aluminum	1	0	0	1
Pb Lead	1	0	0	0
Sn Tin	0	0	0	0
Si Silicon	6	4	6	39
Na Sodium	5	3	3	1
K Potassium	0	2	1	0
Mo Molybdenum	0	0	0	2
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	1	1	0	1
Cd Cadmium	0	0	0	0
Ca Calcium	1328	1072	732	3266
P Phosphorus	682	423	363	785
Zn Zinc	507	364	205	1056
Mg Magnesium	13	11	9	36
Ba Barium	0	0	0	0
B Boron	58	59	71	20

## INFRARED (UFM) ASTM E2412

OXI Oxidation	6	7	8	7
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## WATER - HOTPLATE

W Water	N	N	N	N
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## CLEANLINESS

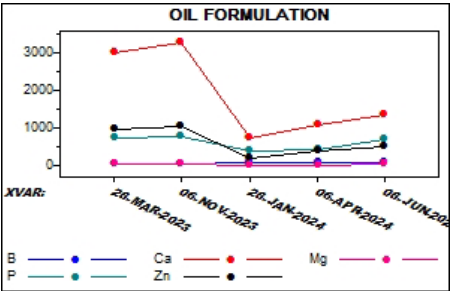
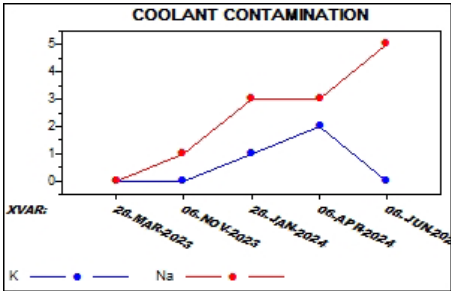
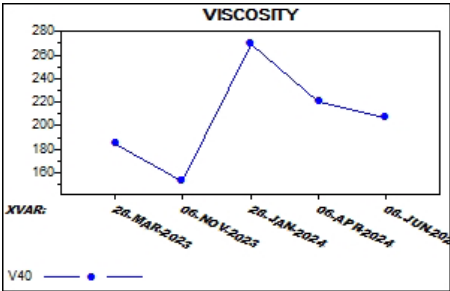
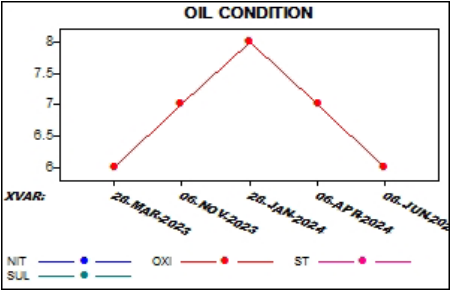
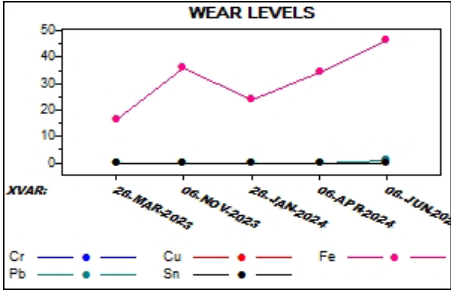
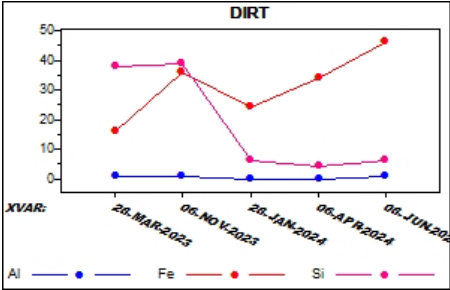
	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>				
ISO ISO Code Rating	19/14	18/12	19/16	20/14
6µ 6µ	3609	1736	4037	6245
14µ 14µ	117	27	548	145

## FERROUS DEBRIS

PQI PQ Index	5	7	1	6
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## VISUAL INSPECTION

DEP DEP	A1	N	N	N
DEP2 DEP2	M-D	N	N	N



Report Comment

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## FINAL DRIVE REAR

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

## RIGHT

CAT D8T



No Action Required

Interp By: Barry Swindells

Interpreted On: 17-Jun-25

T010-55163-0430

LABEL#: 258859223

SHOP JOB NUM : 2w94131

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

## SAMPLE INFORMATION



	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
Sample Id	T010-55163-0430	T010-54101-0138	T010-54031-0136	T010-53312-0536
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23
Meter [Hr]	7487	7058.0	6516.0	5992.0
Comp Meter [Hr]		7058.0	6515.0	
Meter On Fluid		1066.0	524.0	1985.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	60	60	60	60
Fluid Type	FDAO	FDAO	FDAO	FDAO
Fluid Change	N	N	N	Y
Filter Change	N	N	N	NA
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

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>					
V40	Viscosity at 40 C	300.1	299.8	303.0	146.9

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	9	8	9	7
-----	-----------	---	---	---	---

## WATER - HOTPLATE

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

## CLEANLINESS

		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>					
ISO	ISO Code Rating	20/16	19/13	19/17	20/14
6µ	6µ	6018	2988	3304	6967
14µ	14µ	550	60	738	94

## FERROUS DEBRIS

PQI	PQ Index	10	8	4	6
-----	----------	----	---	---	---

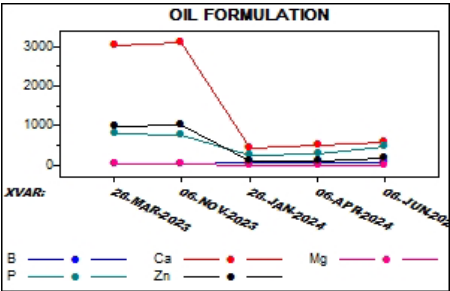
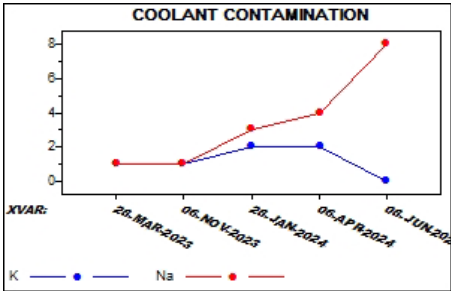
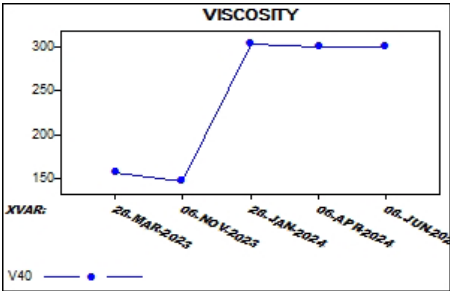
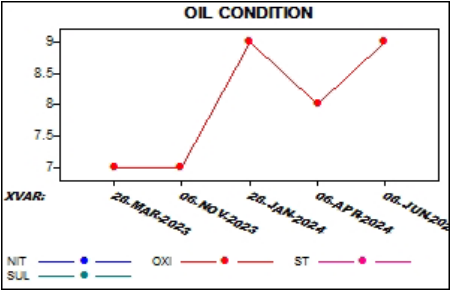
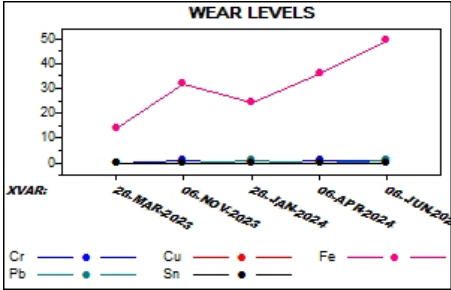
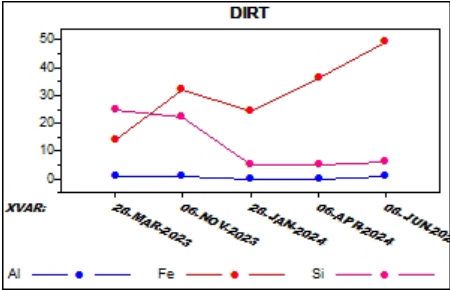
## VISUAL INSPECTION

DEP	DEP	A1	N	N	N
DEP2	DEP2	M-D	N	N	N

## WEAR LEVELS / ADDITIVES

08-Jun-25 06-Apr-24 28-Jan-24 06-Nov-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	0	0	0	0
Fe	Iron	49	36	24	32
Cr	Chromium	1	1	0	1
Al	Aluminum	1	0	0	1
Pb	Lead	1	0	1	0
Sn	Tin	0	0	0	0
Si	Silicon	6	5	5	22
Na	Sodium	8	4	3	1
K	Potassium	0	2	2	1
Mo	Molybdenum	0	0	0	1
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	1	1	0	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	572	488	440	3087
P	Phosphorus	478	273	263	759
Zn	Zinc	157	110	92	1016
Mg	Magnesium	8	6	6	31
Ba	Barium	0	0	0	0
B	Boron	78	69	67	12



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](http://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.

## RADIATOR

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

CAT D8T



## Action Required

Interp By: Tom Cokalis

Interpreted On: 13-Nov-23

T010-53312-2043

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

COPPER LEVELS ARE HIGH. IRON AND ZINC LEVELS ARE SLIGHTLY ELEVATED. ALTHOUGH LEVELS HAVE DECREASED FROM PREVIOUS SAMPLE. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. CHECK FOR ANY SYSTEM WARNINGS OR OTHER INDICATORS OF OVERHEATING. RECOMMEND DRAINING AND REPLENISHING WITH A COMPATIBLE QUALITY COOLANT. WE WILL CONTINUE TO MONITOR COOLANT CONDITION. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

## SAMPLE INFORMATION



Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-2043	T010-53090-2013
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	5992.0	5496
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	ELC ADVANCED	ELC
Fluid Change	N	N
Filter Change	NA	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

WEAR LEVELS APPEAR HIGH, MODERATE AMOUNT OF BLACK & BROWN SOLID NON-MAGNETIC PARTICLES PRESENT. DEPOSITS CAN ACCELERATE WEAR OF COOLING SYSTEM COMPONENTS AND MAY REDUCE THE EFFICIENCY OF HEAT TRANSFER BY BLOCKING PASSAGES AND COATING SURFACES. CHECK FOR LOCALIZED OVERHEATING OR RESTRICTED FLOW IN THE COOLING SYSTEM. CHECK RADIATOR FINNS ARE FREE OF DUST & COOLANT LEVELS INCLUDING OVERFLOW TANK ARE FILLED TO CORRECT LEVELS. CHECK SERVICE HISTORY FOR ANY SCHEDULED INHIBITOR ADDITION AND COOLANT LIFE TO DETERMINE WHEN REPLACEMENT IS NECESSARY. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

For additional sample history, go to:

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

## ADDITIONAL CHARACTERISTICS

		06-Nov-23	28-Mar-23
<b>ION CHROMATOGRAPHY (PPM) ASTM D4327</b>			
CL	Chloride	73	110
SO4	Sulfate	64	109

## ADDITIONAL ANALYTES

TH	Total Hardness	27	33
----	----------------	----	----

## REFRACTIVE INDEX

GL	Glycol (%)	45	42
FP	Freeze Point (°C)	-31	-28
BP	Boil Point (°C)	106	105

## pH

pH	pH	7.3	7.2
----	----	-----	-----

## CONDUCTIVITY (µS/cm)

CON	Conductivity	3553	4503
-----	--------------	------	------

## PHYSICAL CHARACTERISTICS

		06-Nov-23	28-Mar-23
<b>PHYSICALS</b>			
Color	Color	red	orange
App	Appearance	clear	clear
Odor	Odor	norm	norm
Oil	Oil	none	none
Foam	Foam	norm	light
PAmt	Precip Amount	trace	moderate
PApp	Precip Appearance	granular	fine
PCol	Precip Color	blk sol	brn/blk sol
PProp	Precip Property	non-mag	non-mag

## CORROSION LEVELS/ CHEMISTRY

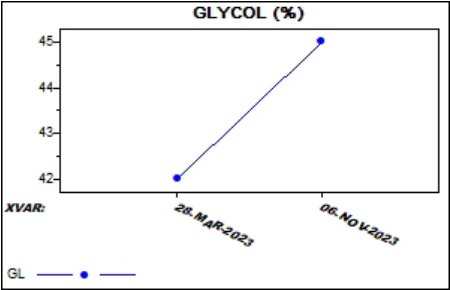
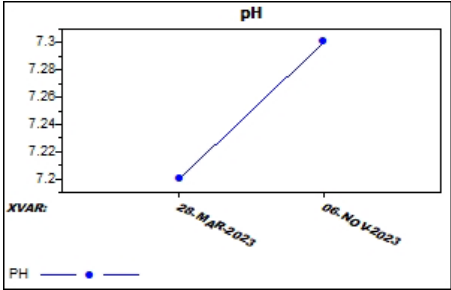
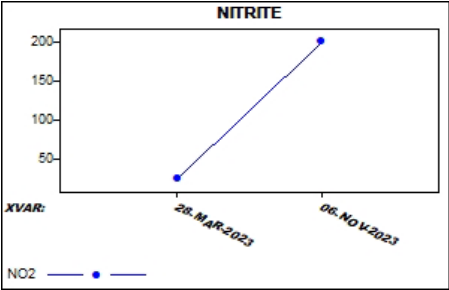
		06-Nov-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu	Copper	32	61
Fe	Iron	14	19
Pb	Lead	0	0
Sn	Tin	0	0
Al	Aluminum	7	7
Zn	Zinc	11	17
Na	Sodium	3290	2762
K	Potassium	313	477
Mo	Molybdenum	496	423

## ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	200	24
NO3	Nitrate	157	100
GLO	Glycolate	1324	1282

## ADDITIONAL ANALYTES

MoO4	Molybdate	826	706
BO3	Borate	1	2
SiO3	Silicate	47	62



**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: JJ501379

SERIAL NUMBER: JJ501379

CAT D8T



Monitor Compartment

Interp By: Barry Swindells  
Interpreted On: 14-Apr-23

T010-53090-2013  
SHOP JOB NUM : 8W35745  
SAMPLE SHIP TIME (days) : 3  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: BOGONG SLIP  
RECEIVED DATE: 31-Mar-23

WEAR LEVELS APPEAR HIGH, MODERATE AMOUNT OF BLACK & BROWN SOLID NON-MAGNETIC PARTICLES PRESENT. DEPOSITS CAN ACCELERATE WEAR OF COOLING SYSTEM COMPONENTS AND MAY REDUCE THE EFFICIENCY OF HEAT TRANSFER BY BLOCKING PASSAGES AND COATING SURFACES. CHECK FOR LOCALIZED OVERHEATING OR RESTRICTED FLOW IN THE COOLING SYSTEM. CHECK RADIATOR FINNS ARE FREE OF DUST & COOLANT LEVELS INCLUDING OVERFLOW TANK ARE FILLED TO CORRECT LEVELS. CHECK SERVICE HISTORY FOR ANY SCHEDULED INHIBITOR ADDITION AND COOLANT LIFE TO DETERMINE WHEN REPLACEMENT IS NECESSARY. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

SAMPLE INFORMATION



Sampled Date	28-Mar-23
Sample Id	T010-53090-2013
Lab Date	31-Mar-23
Meter [Hr]	5496
Meter On Fluid	5496
Fluid Brand	
Fluid Weight	
Fluid Type	ELC
Fluid Change	N
Filter Change	N
Total Fluid Added	0

PREVIOUS SAMPLE

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

ADDITIONAL CHARACTERISTICS

28-Mar-23

ION CHROMATOGRAPHY (PPM) ASTM D4327

CL	Chloride	110
SO4	Sulfate	109

ADDITIONAL ANALYTES

TH	Total Hardness	33
----	----------------	----

REFRACTIVE INDEX

GL	Glycol (%)	42
FP	Freeze Point (°C)	-28
BP	Boil Point (°C)	105

CORROSION LEVELS/ CHEMISTRY

28-Mar-23

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

Cu	Copper	61
Fe	Iron	19
Pb	Lead	0
Sn	Tin	0
Al	Aluminum	7
Zn	Zinc	17
Na	Sodium	2762
K	Potassium	477
Mo	Molybdenum	423

ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	24
NO3	Nitrate	100
GLO	Glycolate	1282

ADDITIONAL ANALYTES

MoO4	Molybdate	706
BO3	Borate	2
SiO3	Silicate	62

pH

pH	pH	7.2
----	----	-----

CONDUCTIVITY (µS/cm)

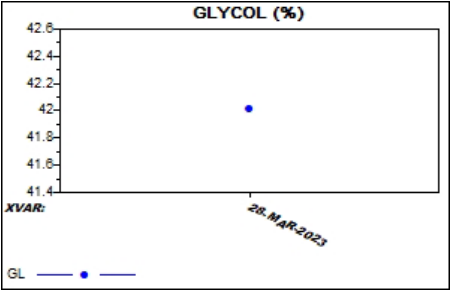
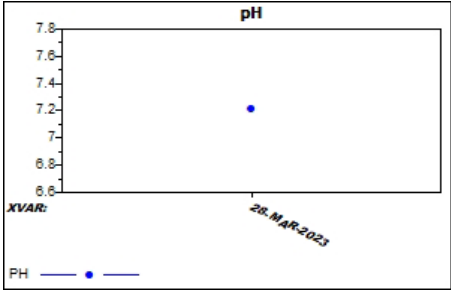
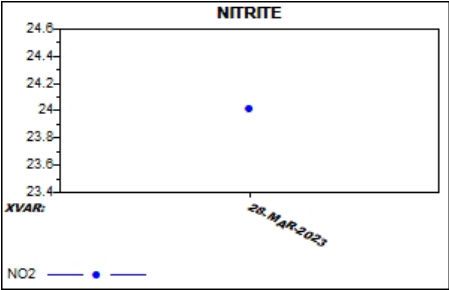
CON	Conductivity	4503
-----	--------------	------

PHYSICAL CHARACTERISTICS

28-Mar-23

PHYSICALS

Color	Color	orange
App	Appearance	clear
Odor	Odor	norm
Oil	Oil	none
Foam	Foam	light
PAmt	Precip Amount	moderate
PApp	Precip Appearance	fine
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: JJ501379

SERIAL NUMBER: JJ501379

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 05-Apr-23

T010-53090-0413

SHOP JOB NUM : 8W35745

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Mar-23

## SAMPLE INFORMATION



Sampled Date	28-Mar-23
Sample Id	T010-53090-0413
Lab Date	31-Mar-23
Meter [Hr]	5496
Meter On Fluid	507
Fluid Brand	CAT
Fluid Weight	15W-40
Fluid Type	
Fluid Change	Y
Filter Change	Y
Make Up Fluid []	43
Total Fluid Added	0

## PREVIOUS SAMPLE

For additional sample history, go to:

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

## CONDITION / CONTAMINATION

28-Mar-23

## VISCOSITY (CENTISTOKES) ASTM D445

V100 Viscosity at 100 C 12.70

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 92.30

## VISCOSITY INDEX

VI Viscosity Index 134

## WEAR LEVELS / ADDITIVES

28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	8
Fe	Iron	10
Cr	Chromium	1
Al	Aluminum	1
Pb	Lead	0
Sn	Tin	0
Si	Silicon	4
Na	Sodium	2
K	Potassium	0
Mo	Molybdenum	65
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	0
Cd	Cadmium	0
Ca	Calcium	1368
P	Phosphorus	935
Zn	Zinc	1078
Mg	Magnesium	433
Ba	Barium	0
B	Boron	261

## INFRARED (UFM) ASTM E2412

ST	Soot	2
OXI	Oxidation	12
SUL	Sulfur Products	19
NIT	Nitration	5

## WATER - HOTPLATE

W Water N

## FUEL DILUTION (SCREEN)

F Fuel N

## FUEL DILUTION (%) ASTM D7593

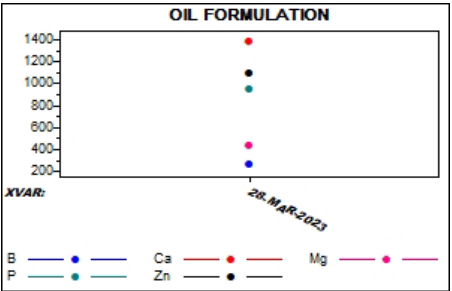
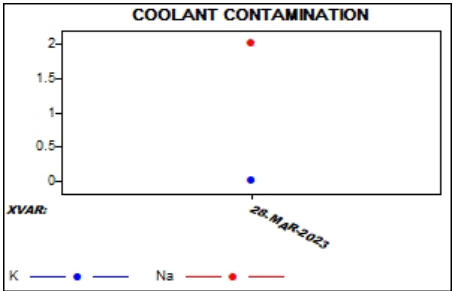
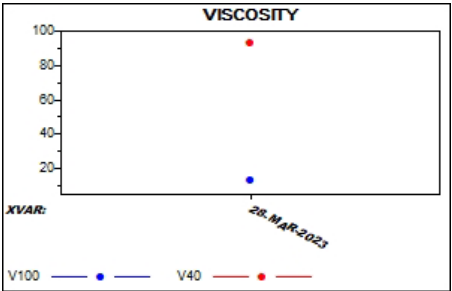
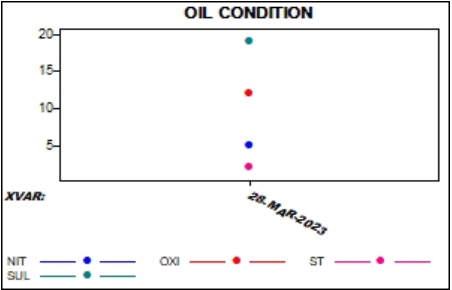
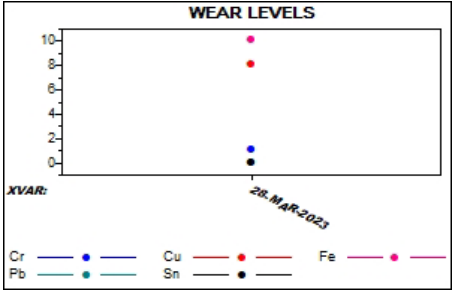
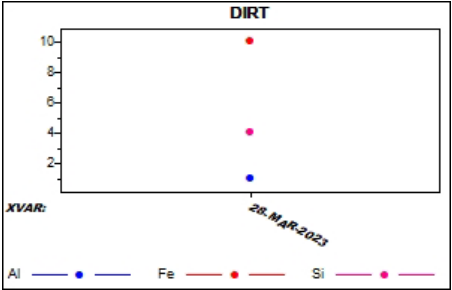
PFc Percent Fuel &lt;2

## CLEANLINESS

28-Mar-23

## 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>



## FINAL DRIVE REAR LEFT

EQUIP NUM: JJ501379

SERIAL NUMBER: JJ501379

CAT D8T



No Action Required

Interp By: Barry Swindells

Interpreted On: 05-Apr-23

T010-53090-0323

SHOP JOB NUM : 8W35745

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Mar-23

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

## SAMPLE INFORMATION



Sampled Date	28-Mar-23
Sample Id	T010-53090-0323
Lab Date	31-Mar-23
Meter [Hr]	5496
Meter On Fluid	1489
Fluid Brand	
Fluid Weight	
Fluid Type	
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

28-Mar-23

## VISCOSITY (CENTISTOKES) ASTM D445

V40 Viscosity at 40 C 184.8

## INFRARED (UFM) ASTM E2412

OXI Oxidation 6

## WATER - HOTPLATE

W Water N

## WEAR LEVELS / ADDITIVES

28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]		
Cu	Copper	0
Fe	Iron	16
Cr	Chromium	0
Al	Aluminum	1
Pb	Lead	0
Sn	Tin	0
Si	Silicon	38
Na	Sodium	0
K	Potassium	0
Mo	Molybdenum	2
Ni	Nickel	0
Ag	Silver	0
Ti	Titanium	0
V	Vanadium	0
Mn	Manganese	0
Cd	Cadmium	0
Ca	Calcium	3000
P	Phosphorus	747
Zn	Zinc	961
Mg	Magnesium	24
Ba	Barium	0
B	Boron	14

## CLEANLINESS

28-Mar-23

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

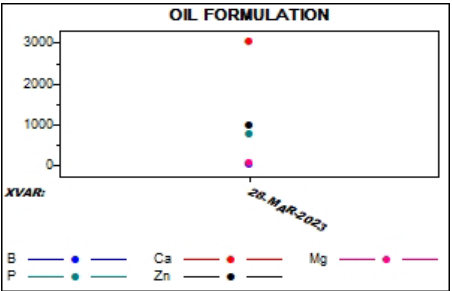
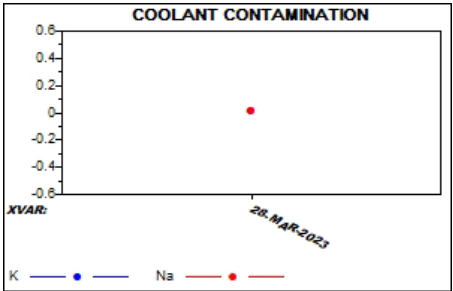
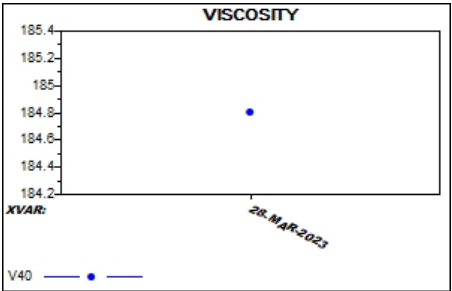
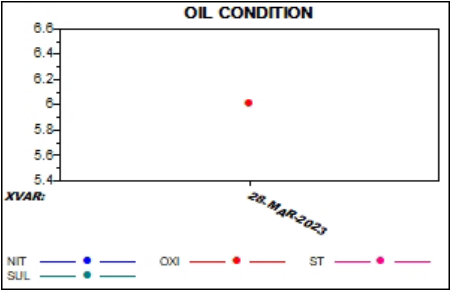
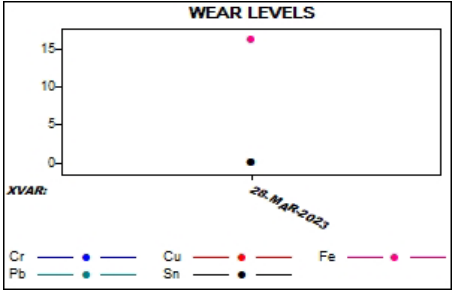
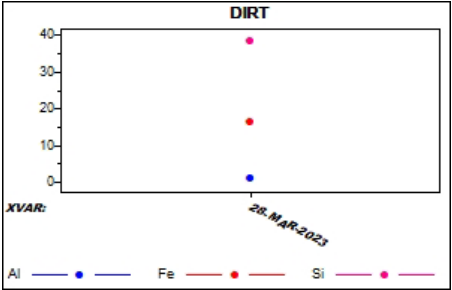
ISO	ISO Code Rating	21/17
6μ	6μ	18540
14μ	14μ	769

## FERROUS DEBRIS

PQI PQ Index 3

## 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>

## ENGINE

EQUIP NUM: JJ501379

SERIAL NUMBER: JJ501379

T010-53104-0603

SHOP JOB NUM : 8W35883

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 14-Apr-23

CAT D8T



No Action Required

Interp By: Barry Swindells

Interpreted On: 22-Apr-23

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

## SAMPLE INFORMATION

Sampled Date	11-Apr-23	28-Mar-23
Sample Id	T010-53104-0603	T010-53090-0413
Lab Date	14-Apr-23	31-Mar-23
Meter [Hr]	5561	5496
Meter On Fluid	61	507
Fluid Brand	CAT	CAT
Fluid Weight	15W-40	15W-40
Fluid Type		
Fluid Change	N	Y
Filter Change	N	Y
Make Up Fluid []	0	43
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

		11-Apr-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V100	Viscosity at 100 C	12.60	12.70

<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	91.41	92.30

## VISCOSITY INDEX

VI	Viscosity Index	134	134
----	-----------------	-----	-----

## WEAR LEVELS / ADDITIVES

		11-Apr-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu	Copper	6	8
Fe	Iron	5	10
Cr	Chromium	0	1
Al	Aluminum	1	1
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	5	4
Na	Sodium	3	2
K	Potassium	1	0
Mo	Molybdenum	40	65
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	0	0
Cd	Cadmium	0	0
Ca	Calcium	1507	1368
P	Phosphorus	886	935
Zn	Zinc	1030	1078
Mg	Magnesium	420	433
Ba	Barium	0	0
B	Boron	80	261

## INFRARED (UFM) ASTM E2412

ST	Soot	1	2
OXI	Oxidation	18	12
SUL	Sulfur Products	22	19
NIT	Nitration	5	5

## WATER - HOTPLATE

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

## FUEL DILUTION (SCREEN)

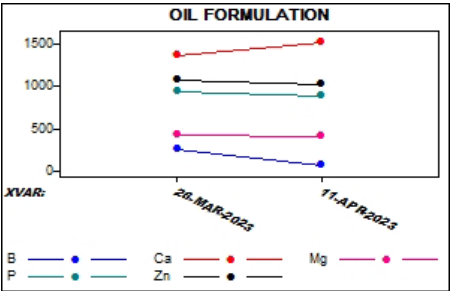
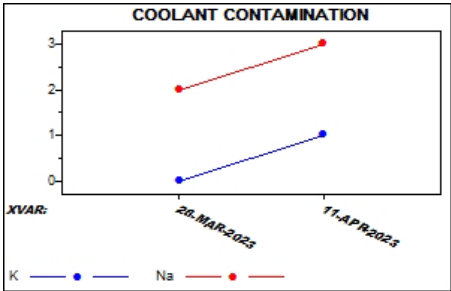
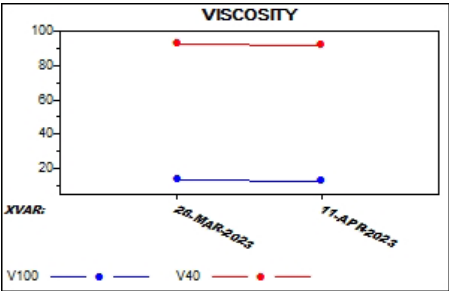
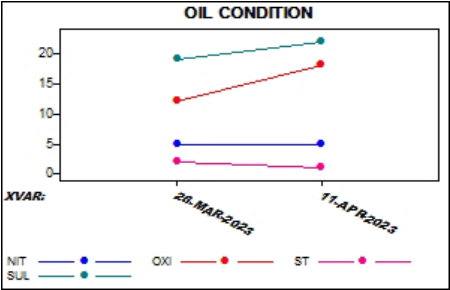
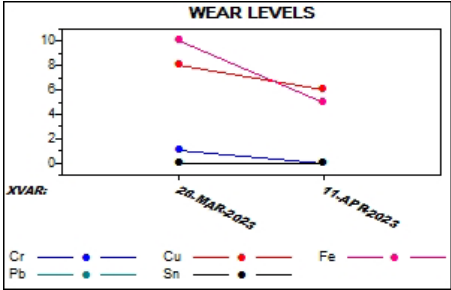
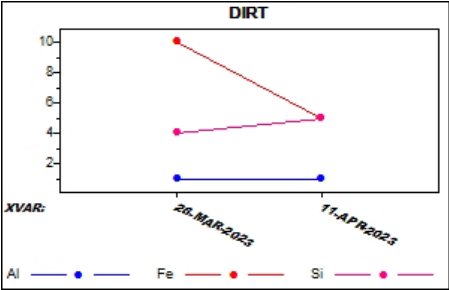
F	Fuel	N	N
---	------	---	---

## FUEL DILUTION (%) ASTM D7593

PFC	Percent Fuel	<2	<2
-----	--------------	----	----

## CLEANLINESS

		11-Apr-23	28-Mar-23
<b>FERROUS DEBRIS</b>			
PQI	PQ Index	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>



ENGINE

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-53263-0724  
SHOP JOB NUM : 8W36689  
SAMPLE SHIP TIME (days) : 3  
**WHELANS GROUP**  
**INVESTMENTS PTY LTD**  
LOCATION: BOGONG  
RECEIVED DATE: 20-Sep-23

CAT D8T

Monitor Compartment

COPPER RESULT APPEARS 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. RESAMPLE IN 250 HOURS TO MONITOR.

Interp By: Barry Swindells  
Interpreted On: 22-Sep-23

SAMPLE INFORMATION

	17-Sep-23	11-Apr-23	28-Mar-23
Sampled Date	17-Sep-23	11-Apr-23	28-Mar-23
Sample Id	T010-53263-0724	T010-53104-0603	T010-53090-0413
Lab Date	20-Sep-23	14-Apr-23	31-Mar-23
Meter [Hr]	5720.0	5561	5496
Meter On Fluid	224.0	61	507
Fluid Brand	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40
Fluid Type	DEO-ULS(CJ-4)		
Fluid Change	N	N	Y
Filter Change	N	N	Y
Make Up Fluid []		0	43
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: [my.cat.com](https://my.cat.com)

CONDITION / CONTAMINATION

		17-Sep-23	11-Apr-23	28-Mar-23
VISCOSITY (CENTISTOKES) ASTM D445				
V100	Viscosity at 100 C	12.22	12.60	12.70
VISCOSITY (CENTISTOKES) ASTM D445				
V40	Viscosity at 40 C	87.77	91.41	92.30

VISCOSITY INDEX

VI	Viscosity Index	133	134	134
----	-----------------	-----	-----	-----

INFRARED (UFM) ASTM E2412

ST	Soot	7	1	2
OXI	Oxidation	20	18	12
SUL	Sulfur Products	23	22	19
NIT	Nitration	0	5	5

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

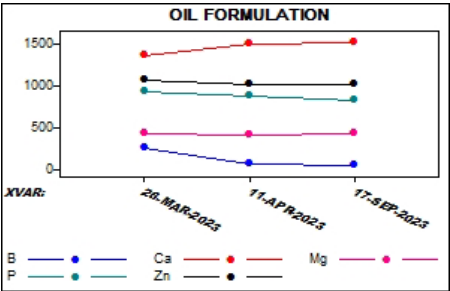
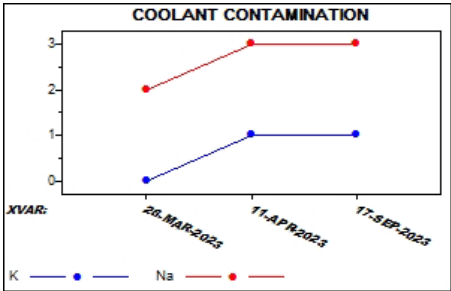
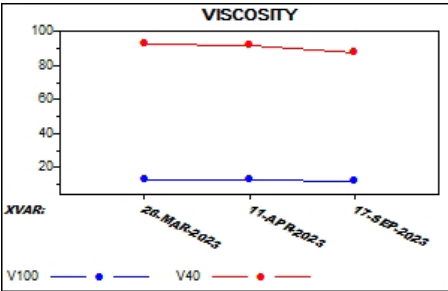
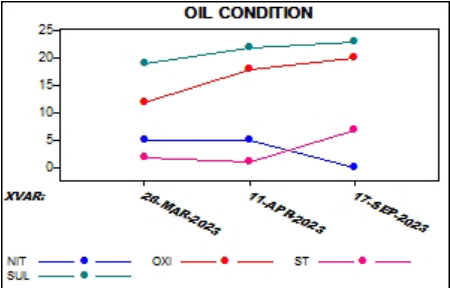
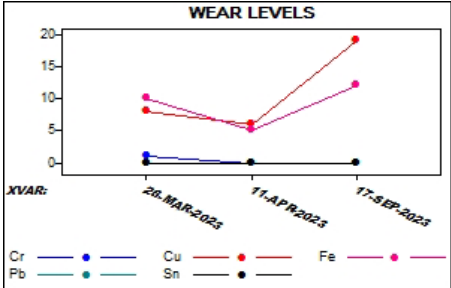
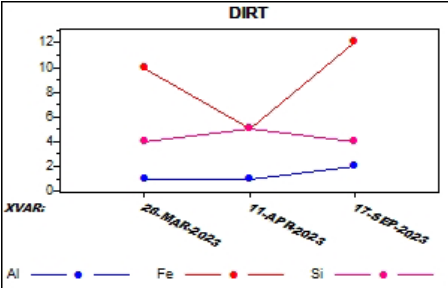
PFc	Percent Fuel	2.24	<2	<2
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CLEANLINESS

		17-Sep-23	11-Apr-23	28-Mar-23
FERROUS DEBRIS				
PQI	PQ Index	0	0	0

WEAR LEVELS / ADDITIVES

		17-Sep-23	11-Apr-23	28-Mar-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	19	6	8
Fe	Iron	12	5	10
Cr	Chromium	0	0	1
Al	Aluminum	2	1	1
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	4	5	4
Na	Sodium	3	3	2
K	Potassium	1	1	0
Mo	Molybdenum	37	40	65
Ni	Nickel	1	0	0
Ag	Silver	0	0	0
Ti	Titanium	0	0	0
V	Vanadium	0	0	0
Mn	Manganese	1	0	0
Cd	Cadmium	0	0	0
Ca	Calcium	1513	1507	1368
P	Phosphorus	835	886	935
Zn	Zinc	1019	1030	1078
Mg	Magnesium	443	420	433
Ba	Barium	0	0	0
B	Boron	67	80	261



**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: D3

SERIAL NUMBER: JJ501379

T010-53312-0411  
SHOP JOB NUM : 8W36904  
SAMPLE SHIP TIME (days) : 2  
**WHELANS GROUP**  
**INVESTMENTS PTY LTD**  
LOCATION: Bogong  
RECEIVED DATE: 08-Nov-23

CAT D8T

Monitor Compartment

WEAR LEVELS CONTINUE TO IMPROVE, MAY BE DUE TO RESIDUAL REMAINS OF PREVIOUS OIL. 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.

Interp By: Barry Swindells  
Interpreted On: 14-Nov-23

SAMPLE INFORMATION

	06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
Sampled Date	06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
Sample Id	T010-53312-0411	T010-53263-0724	T010-53104-0603	T010-53090-0413
Lab Date	08-Nov-23	20-Sep-23	14-Apr-23	31-Mar-23
Meter [Hr]	5992.0	5720.0	5561	5496
Meter On Fluid	496.0	224.0	61	507
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)		
Fluid Change	Y	N	N	Y
Filter Change	Y	N	N	Y
Make Up Fluid []			0	43
Total Fluid Added	0	0	0	0

PREVIOUS SAMPLE

COPPER FILTER(S)	RESULT AND INSPECT	APPEARS FOR DEBRIS.	SLIGHTLY CHECK & ENSURE THIS COMPARTMENT OPERATING	ELEVATED, CHECK	SUGGEST CUT	OPEN TEMPERATURE.
MONITOR	IDLE TIME.	CHECK				
CORRECTLY.	AS THE OIL HAS NOT BEEN CHANGED.	WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES.	ALL OTHER TEST RESULTS APPEAR ACCEPTABLE.	RESAMPLE IN 250 HOURS TO MONITOR.		

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

CONDITION / CONTAMINATION

		06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.31	12.22	12.60	12.70

V40	Viscosity at 40 C	87.69	87.77	91.41	92.30
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VI	Viscosity Index	135	133	134	134
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INFRARED (UFM) ASTM E2412					
ST	Soot	17	7	1	2
OXI	Oxidation	21	20	18	12
SUL	Sulfur Products	25	23	22	19
NIT	Nitration	0	0	5	5

WATER - HOTPLATE					
W	Water	N	N	N	N

FUEL DILUTION (SCREEN)					
F	Fuel	N	N	N	N

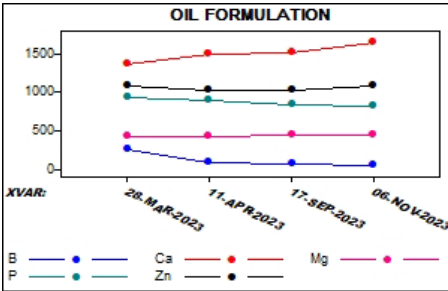
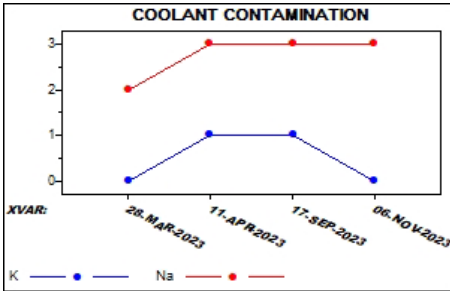
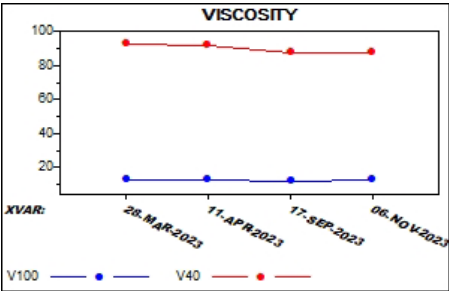
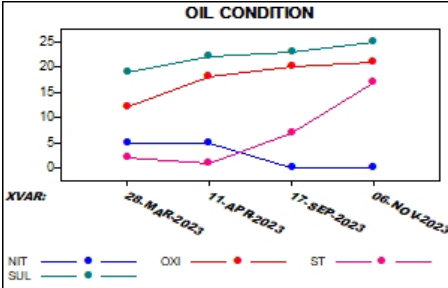
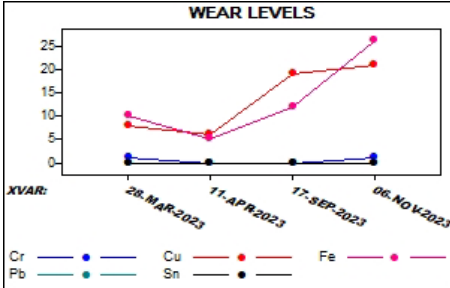
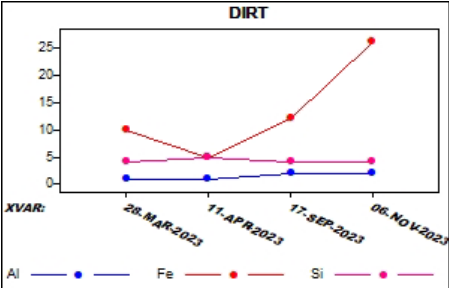
FUEL DILUTION (%) ASTM D7593					
PFc	Percent Fuel	3.15	2.24	<2	<2

CLEANLINESS

		06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0

WEAR LEVELS / ADDITIVES

		06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	21	19	6	8
Fe	Iron	26	12	5	10
Cr	Chromium	1	0	0	1
Al	Aluminum	2	2	1	1
Pb	Lead	0	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	4	4	5	4
Na	Sodium	3	3	3	2
K	Potassium	0	1	1	0
Mo	Molybdenum	39	37	40	65
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	1	1	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	1641	1513	1507	1368
P	Phosphorus	821	835	886	935
Zn	Zinc	1090	1019	1030	1078
Mg	Magnesium	445	443	420	433
Ba	Barium	0	0	0	0
B	Boron	55	67	80	261



**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: D3

SERIAL NUMBER: JJ501379

CAT D8T



## Monitor Compartment

Interp By: Barry Swindells

Interpreted On: 13-Nov-23

T010-53312-0517

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

SILICON IS SLIGHTLY HIGH. THE OIL VISCOSITY @40C IS HIGHER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. TRACE AMOUNT OF LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUND. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. SUGGEST CUT OPEN FILTER(S) AND INSPECT FOR DEBRIS. MONITOR COMPARTMENT FOR RISING OIL LEVEL. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. RECOMMEND SCHEDULE UNIT FOR INSPECTION ASAP. AFTER INSPECTION AND SERVICE, RESAMPLE AT HALF THE RECOMMENDED INTERVAL TO RE-EVALUATE CONDITION. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION



Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-0517	T010-53090-0304
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	1985.0	1489
Fluid Brand	CAT	
Fluid Weight	10W	
Fluid Type	HYDO ADVANCED	
Fluid Change	Y	N
Filter Change	Y	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

SILICON IS SLIGHTLY HIGH. WEAR RATES APPEAR TO REMAIN NORMAL. SUGGEST CUT OPEN FILTER(S) AND INSPECT FOR DEBRIS. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. RESAMPLE IN 500 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

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

## CONDITION / CONTAMINATION

	06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>		
V40 Viscosity at 40 C	63.33	64.79

## INFRARED (UFM) ASTM E2412

OXI Oxidation	6	5
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## WEAR LEVELS / ADDITIVES

06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	13	11
Fe	Iron	14	10
Cr	Chromium	1	1
Al	Aluminum	8	5
Pb	Lead	1	1
Sn	Tin	0	0
Si	Silicon	29	24
Na	Sodium	3	2
K	Potassium	3	2
Mo	Molybdenum	18	16
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	0	0
Cd	Cadmium	0	0
Ca	Calcium	1020	941
P	Phosphorus	583	572
Zn	Zinc	764	705
Mg	Magnesium	253	216
Ba	Barium	0	0
B	Boron	58	58

## WATER - HOTPLATE

W	Water	N	N
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## CLEANLINESS

06-Nov-23 28-Mar-23

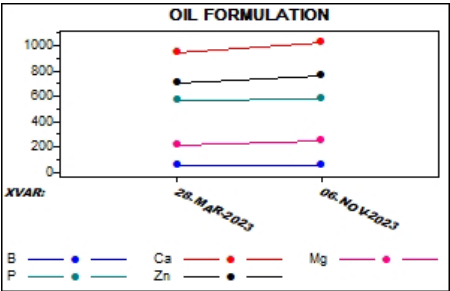
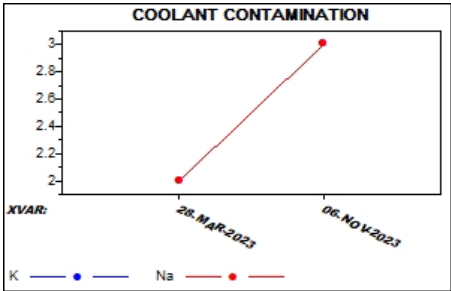
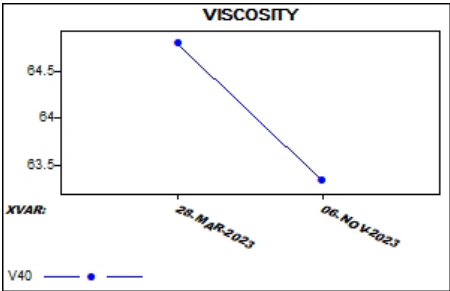
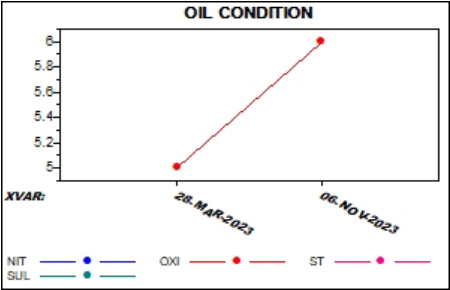
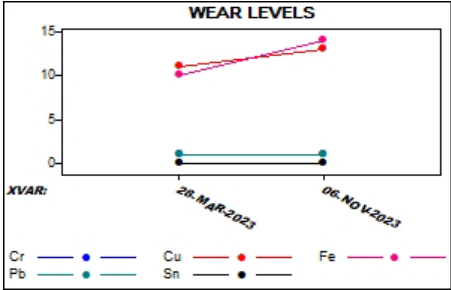
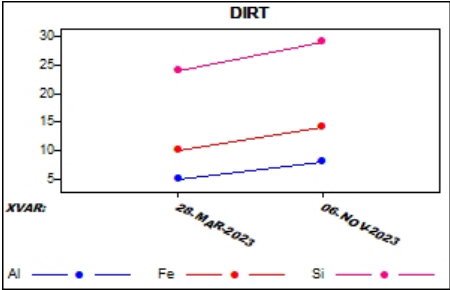
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406			
ISO	ISO Code Rating	20/13/10	19/15/11
4μ	4μ	7239	3539
6μ	6μ	73	206
14μ	14μ	7	17

## FERROUS DEBRIS

PQI	PQ Index	0	0
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## VISUAL INSPECTION

DEP	DEP	C1	A1
DEP2	DEP2	DEB	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>

## FINAL DRIVE REAR LEFT

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

CAT D8T



## Monitor Compartment

Interp By: Barry Swindells

Interpreted On: 13-Nov-23

T010-53312-0535

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. 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. RESAMPLE IN 500 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION



Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-0535	T010-53090-0323
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	1985.0	1489
Fluid Brand	CAT	
Fluid Weight	60	
Fluid Type	FDAO	
Fluid Change	Y	N
Filter Change	NA	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

		06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	153.2	184.8
<b>INFRARED (UFM) ASTM E2412</b>			
OXI	Oxidation	7	6

## WEAR LEVELS / ADDITIVES

		06-Nov-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu	Copper	0	0
Fe	Iron	36	16
Cr	Chromium	0	0
Al	Aluminum	1	1
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	39	38
Na	Sodium	1	0
K	Potassium	0	0
Mo	Molybdenum	2	2
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	1	0
Cd	Cadmium	0	0
Ca	Calcium	3266	3000
P	Phosphorus	785	747
Zn	Zinc	1056	961
Mg	Magnesium	36	24
Ba	Barium	0	0
B	Boron	20	14

## WATER - HOTPLATE

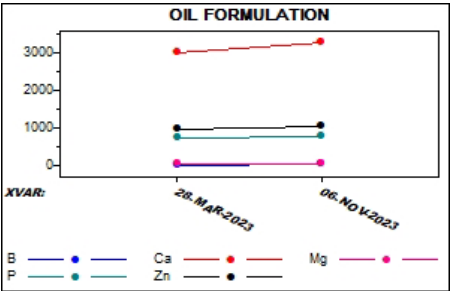
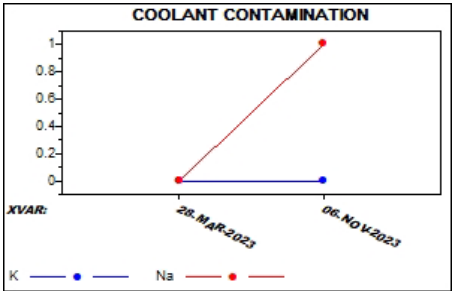
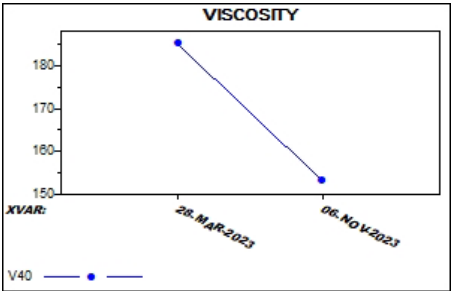
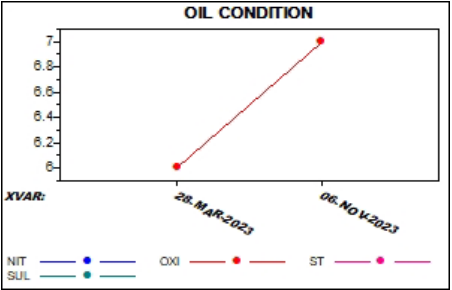
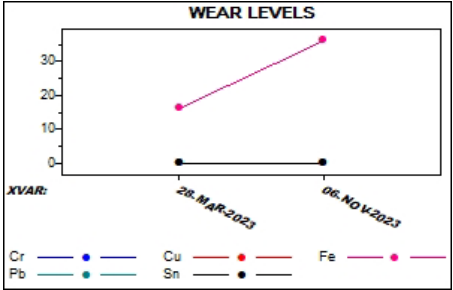
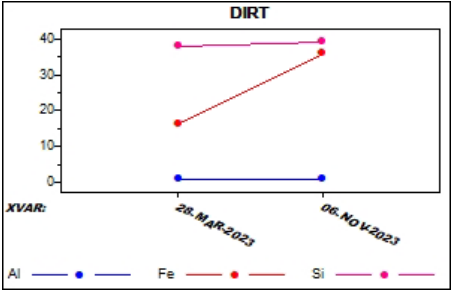
W	Water	N	N
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## CLEANLINESS

		06-Nov-23	28-Mar-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>			
ISO	ISO Code Rating	20/14	21/17
6μ	6μ	6245	18540
14μ	14μ	145	769
<b>FERROUS DEBRIS</b>			
PQI	PQ Index	6	3

## 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>

## FINAL DRIVE REAR

## RIGHT

T010-53312-0536

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

EQUIP NUM: D3

CAT D8T



## Monitor Compartment

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

Interpreted On: 13-Nov-23

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. 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. RESAMPLE IN 500 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

## SAMPLE INFORMATION



Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-0536	T010-53090-7916
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	1985.0	1489
Fluid Brand	CAT	
Fluid Weight	60	
Fluid Type	FDAO	
Fluid Change	Y	N
Filter Change	NA	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](http://my.cat.com)

## CONDITION / CONTAMINATION

		06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	146.9	156.6

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	7	7
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## WATER - HOTPLATE

W	Water	N	N
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## WEAR LEVELS / ADDITIVES

06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	0	0
Fe	Iron	32	14
Cr	Chromium	1	0
Al	Aluminum	1	1
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	22	25
Na	Sodium	1	1
K	Potassium	1	1
Mo	Molybdenum	1	0
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	1	0
Cd	Cadmium	0	0
Ca	Calcium	3087	3019
P	Phosphorus	759	790
Zn	Zinc	1016	976
Mg	Magnesium	31	30
Ba	Barium	0	0
B	Boron	12	11

## CLEANLINESS

06-Nov-23 28-Mar-23

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

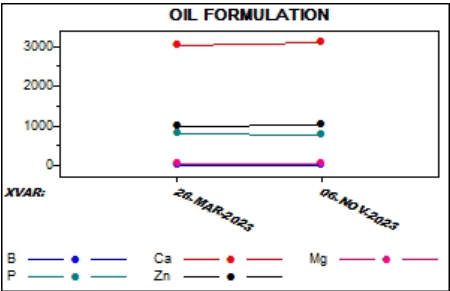
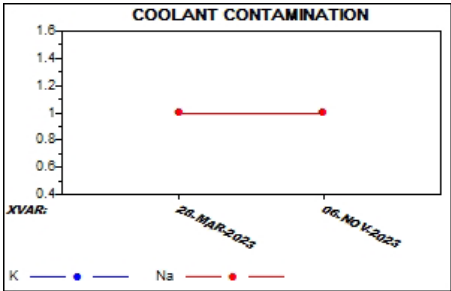
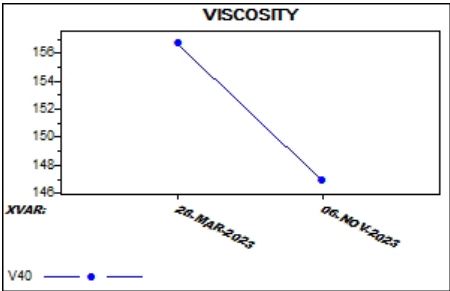
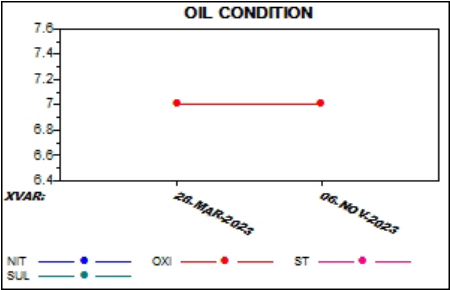
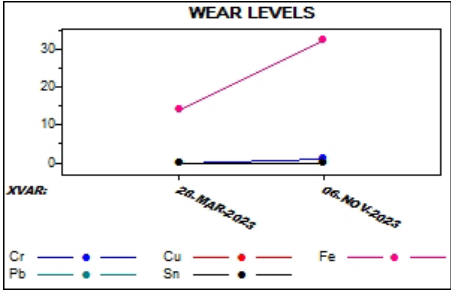
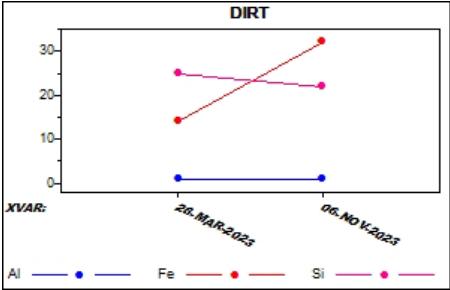
ISO	ISO Code Rating	20/14	21/16
6μ	6μ	6967	13842
14μ	14μ	94	556

## FERROUS DEBRIS

PQI	PQ Index	6	2
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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>

## TRANSMISSION POWER

## SHIFT

T010-53312-0523

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

EQUIP NUM: D3

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY,  
DEVELOP A TREND.

CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

MORE SAMPLES NEEDED TO

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

Interpreted On: 13-Nov-23

## SAMPLE INFORMATION

Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-0523	T010-53090-0116
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	1003.0	
Fluid Brand	CAT	
Fluid Weight	30	
Fluid Type	TDTO	
Fluid Change	Y	N
Filter Change	Y	Y
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

		06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>			
V40	Viscosity at 40 C	82.71	83.34

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	6	6
-----	-----------	---	---

## WATER - HOTPLATE

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

## WEAR LEVELS / ADDITIVES

		06-Nov-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>			
Cu	Copper	1	1
Fe	Iron	9	4
Cr	Chromium	0	0
Al	Aluminum	1	1
Pb	Lead	0	0
Sn	Tin	0	0
Si	Silicon	6	6
Na	Sodium	2	1
K	Potassium	0	0
Mo	Molybdenum	1	1
Ni	Nickel	0	0
Ag	Silver	0	0
Ti	Titanium	0	0
V	Vanadium	0	0
Mn	Manganese	0	0
Cd	Cadmium	0	0
Ca	Calcium	3203	2947
P	Phosphorus	842	853
Zn	Zinc	1100	1005
Mg	Magnesium	63	59
Ba	Barium	0	0
B	Boron	35	35

## CLEANLINESS

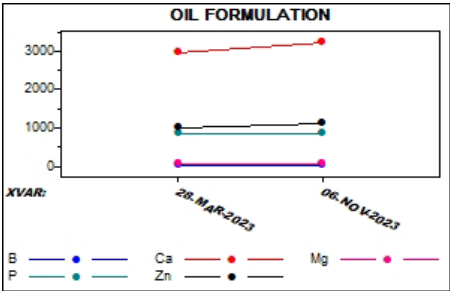
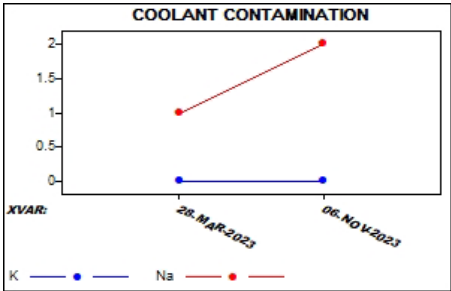
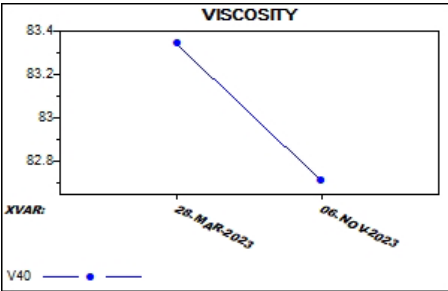
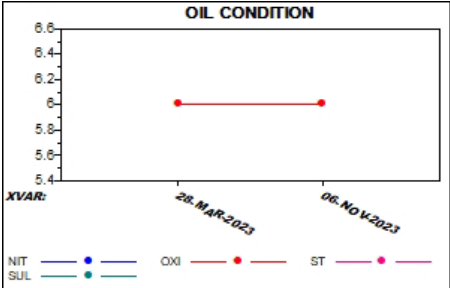
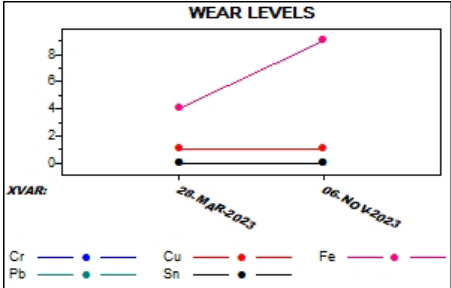
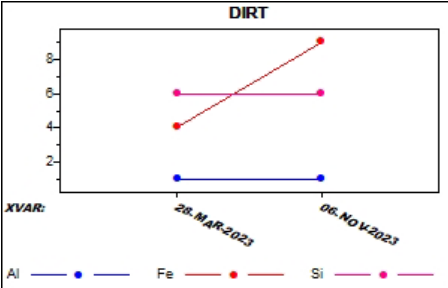
		06-Nov-23	28-Mar-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>			
ISO	ISO Code Rating	19/14/10	18/17/16
4μ	4μ	2542	2225
6μ	6μ	109	730
14μ	14μ	10	377

## FERROUS DEBRIS

PQI	PQ Index	0	0
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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>



## RADIATOR

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-53312-2043

SHOP JOB NUM : 8W36904

SAMPLE SHIP TIME (days) : 2

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

CAT D8T



## Action Required

COPPER LEVELS ARE HIGH. IRON AND ZINC LEVELS ARE SLIGHTLY ELEVATED. ALTHOUGH LEVELS HAVE DECREASED FROM PREVIOUS SAMPLE. ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. CHECK FOR ANY SYSTEM WARNINGS OR OTHER INDICATORS OF OVERHEATING. RECOMMEND DRAINING AND REPLENISHING WITH A COMPATIBLE QUALITY COOLANT. WE WILL CONTINUE TO MONITOR COOLANT CONDITION. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

Interp By: Tom Cokalis

Interpreted On: 13-Nov-23

## SAMPLE INFORMATION



Sampled Date	06-Nov-23	28-Mar-23
Sample Id	T010-53312-2043	T010-53090-2013
Lab Date	08-Nov-23	31-Mar-23
Meter [Hr]	5992.0	5496
Meter On Fluid	5992.0	5496
Fluid Brand	CAT	
Fluid Weight		
Fluid Type	ELC ADVANCED	ELC
Fluid Change	N	N
Filter Change	NA	N
Total Fluid Added	0	0

## PREVIOUS SAMPLE

WEAR LEVELS APPEAR HIGH, MODERATE AMOUNT OF BLACK & BROWN SOLID NON-MAGNETIC PARTICLES PRESENT. DEPOSITS CAN ACCELERATE WEAR OF COOLING SYSTEM COMPONENTS AND MAY REDUCE THE EFFICIENCY OF HEAT TRANSFER BY BLOCKING PASSAGES AND COATING SURFACES. CHECK FOR LOCALIZED OVERHEATING OR RESTRICTED FLOW IN THE COOLING SYSTEM. CHECK RADIATOR FINNS ARE FREE OF DUST & COOLANT LEVELS INCLUDING OVERFLOW TANK ARE FILLED TO CORRECT LEVELS. CHECK SERVICE HISTORY FOR ANY SCHEDULED INHIBITOR ADDITION AND COOLANT LIFE TO DETERMINE WHEN REPLACEMENT IS NECESSARY. AFTER SERVICING RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT CONDITION.

For additional sample history, go to:

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

## ADDITIONAL CHARACTERISTICS

		06-Nov-23	28-Mar-23
ION CHROMATOGRAPHY (PPM) ASTM D4327			
CL	Chloride	73	110
SO4	Sulfate	64	109

## ADDITIONAL ANALYTES

TH	Total Hardness	27	33
----	----------------	----	----

## REFRACTIVE INDEX

GL	Glycol (%)	45	42
FP	Freeze Point (°C)	-31	-28
BP	Boil Point (°C)	106	105

## pH

pH	pH	7.3	7.2
----	----	-----	-----

## CONDUCTIVITY (µS/cm)

CON	Conductivity	3553	4503
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## PHYSICAL CHARACTERISTICS

		06-Nov-23	28-Mar-23
PHYSICALS			
Color	Color	red	orange
App	Appearance	clear	clear
Odor	Odor	norm	norm
Oil	Oil	none	none
Foam	Foam	norm	light
PAmt	Precip Amount	trace	moderate
PApp	Precip Appearance	granular	fine
PCol	Precip Color	blk sol	brn/blk sol
PProp	Precip Property	non-mag	non-mag

## CORROSION LEVELS/ CHEMISTRY

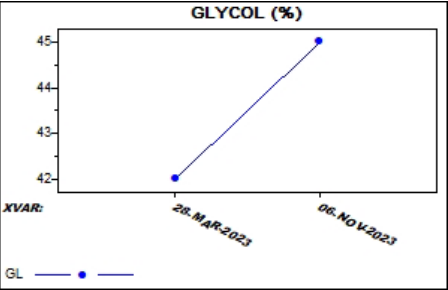
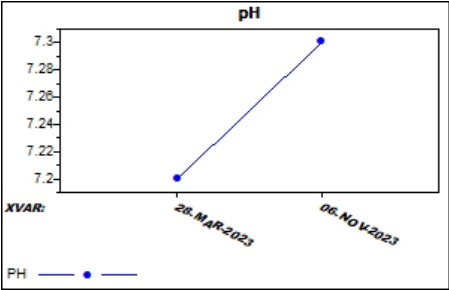
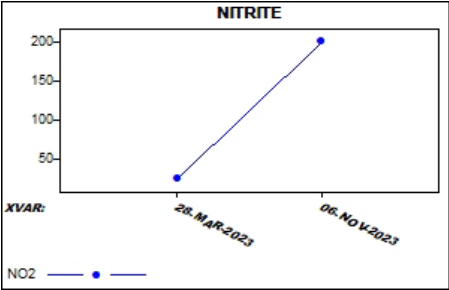
		06-Nov-23	28-Mar-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]			
Cu	Copper	32	61
Fe	Iron	14	19
Pb	Lead	0	0
Sn	Tin	0	0
Al	Aluminum	7	7
Zn	Zinc	11	17
Na	Sodium	3290	2762
K	Potassium	313	477
Mo	Molybdenum	496	423

## ION CHROMATOGRAPHY (PPM) ASTM D4327

NO2	Nitrite	200	24
NO3	Nitrate	157	100
GLO	Glycolate	1324	1282

## ADDITIONAL ANALYTES

MoO4	Molybdate	826	706
BO3	Borate	1	2
SiO3	Silicate	47	62



**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: D3

SERIAL NUMBER: JJ501379

CAT D8T



Monitor Compartment

IRON; ALUMINIUM; COPPER; ZINC; LEVELS  
TEMPERATURE. ALL OTHER COMPARTMENT  
COOLANT CONDITION. AFTER SERVICING  
CONDITION.

ARE ELEVATED BUT HAVE BEGAN TO SUBSIDE. CHECK OPERATING  
INDICATORS APPEAR ACCEPTABLE. WE WILL CONTINUE TO MONITOR  
RESAMPLE AT NEXT MAINTENANCE INTERVAL TO CHECK COOLANT

Interp By: Tom Cokalis  
Interpreted On: 02-Feb-24

T010-54031-2009

LABEL#: 2

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

SAMPLE INFORMATION



	28-Jan-24	06-Nov-23	28-Mar-23
Sample Date	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54031-2009	T010-53312-2043	T010-53090-2013
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	6516.0	5992.0	5496
Comp Meter [Hr]	6515.0		
Meter On Fluid	6516.0	5992.0	5496
Fluid Brand	CAT	CAT	
Fluid Weight			
Fluid Type	ELC ADVANCED	ELC ADVANCED	ELC
Fluid Change	N	N	N
Filter Change	N	NA	N
Total Fluid Added	0	0	0

PREVIOUS SAMPLE

COPPER LEVELS ARE HIGH. IRON AND ZINC LEVELS ARE SLIGHTLY  
ELEVATED. ALTHOUGH LEVELS HAVE DECREASED FROM PREVIOUS SAMPLE.  
ALL OTHER COMPARTMENT INDICATORS APPEAR ACCEPTABLE. CHECK FOR  
ANY SYSTEM WARNINGS OR OTHER INDICATORS OF OVERHEATING.  
RECOMMEND DRAINING AND REPLENISHING WITH A COMPATIBLE QUALITY  
COOLANT. 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

	28-Jan-24	06-Nov-23	28-Mar-23
ION CHROMATOGRAPHY (PPM) ASTM D4327			
CL Chloride	70	73	110
SO4 Sulfate	53	64	109

CORROSION LEVELS/ CHEMISTRY

28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu Copper	21	32	61	
Fe Iron	14	14	19	
Pb Lead	0	0	0	
Sn Tin	0	0	0	
Al Aluminum	8	7	7	
Zn Zinc	8	11	17	
Na Sodium	3544	3290	2762	
K Potassium	307	313	477	
Mo Molybdenum	502	496	423	

ADDITIONAL ANALYTES

TH	Total Hardness	23	27	33
----	----------------	----	----	----

REFRACTIVE INDEX

GL	Glycol (%)	45	45	42
FP	Freeze Point (°C)	-31	-31	-28
BP	Boil Point (°C)	106	106	105

pH

pH	pH	7.7	7.3	7.2
----	----	-----	-----	-----

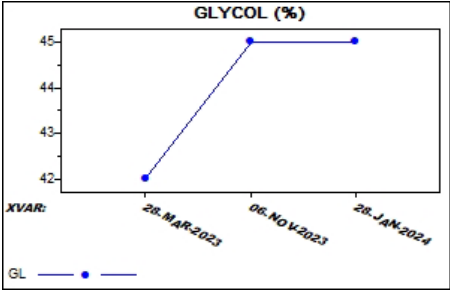
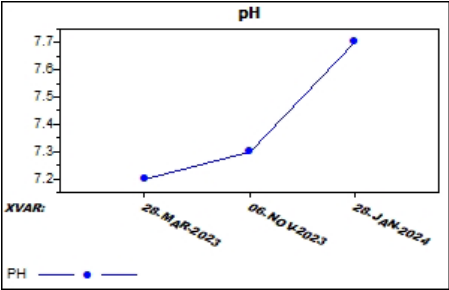
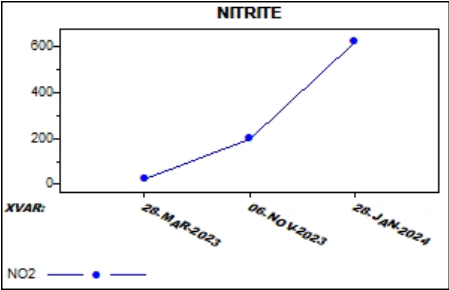
ION CHROMATOGRAPHY (PPM) ASTM D4327				
NO2	Nitrite	619	200	24
NO3	Nitrate	302	157	100
GLO	Glycolate	603	1324	1282

CONDUCTIVITY (µS/cm)				
CON	Conductivity	3467	3553	4503

PHYSICAL CHARACTERISTICS

28-Jan-24 06-Nov-23 28-Mar-23

PHYSICALS				
Color	Color	red	red	orange
App	Appearance	clear	clear	clear
Odor	Odor	norm	norm	norm
Oil	Oil	none	none	none
Foam	Foam	norm	norm	light
PAmt	Precip Amount	trace	trace	moderate
PApp	Precip Appearance	granular	granular	fine
PCol	Precip Color	blk sol	blk sol	brn/blk sol
PProp	Precip Property	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: D3

SERIAL NUMBER: JJ501379

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis  
Interpreted On: 02-Feb-24

T010-54031-0208

LABEL#: 1

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

## SAMPLE INFORMATION

	28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
Sample Id	T010-54031-0208	T010-53352-0410	T010-53312-0411	T010-53263-0724
Lab Date	31-Jan-24	18-Dec-23	08-Nov-23	20-Sep-23
Meter [Hr]	6516.0	6278.0	5992.0	5720.0
Comp Meter [Hr]	6515.0			
Meter On Fluid	524.0	286.0	496.0	224.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)
Fluid Change	Y	N	Y	N
Filter Change	Y	N	Y	N
Make Up Fluid [L]		0.0		
Total Fluid Added	0.0	0.0	0	0

## WEAR LEVELS / ADDITIVES

		28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	7	5	21	19
Fe	Iron	35	17	26	12
Cr	Chromium	1	0	1	0
Al	Aluminum	2	2	2	2
Pb	Lead	1	0	0	0
Sn	Tin	0	0	0	0
Si	Silicon	4	3	4	4
Na	Sodium	2	2	3	3
K	Potassium	1	1	0	1
Mo	Molybdenum	39	40	39	37
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	0	1	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1639	1623	1641	1513
P	Phosphorus	825	856	821	835
Zn	Zinc	1089	1089	1090	1019
Mg	Magnesium	482	478	445	443
Ba	Barium	0	0	0	0
B	Boron	40	48	55	67

## PREVIOUS SAMPLE

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	AT THE
					RECOMMENDED INTERVAL.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.50	12.37	12.31	12.22

## VISCOSITY (CENTISTOKES) ASTM D445

V40	Viscosity at 40 C	88.46	87.26	87.69	87.77
-----	-------------------	-------	-------	-------	-------

## VISCOSITY INDEX

VI	Viscosity Index	137	138	135	133
----	-----------------	-----	-----	-----	-----

## INFRARED (UFM) ASTM E2412

ST	Soot	25	14	17	7
OXI	Oxidation	23	22	21	20
SUL	Sulfur Products	27	24	25	23
NIT	Nitration	0	0	0	0

## WATER - HOTPLATE

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

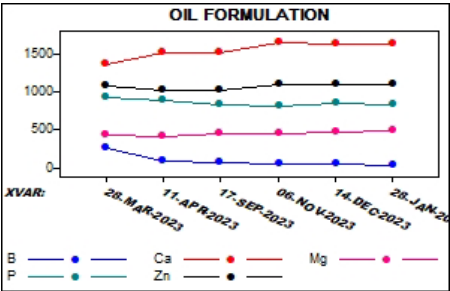
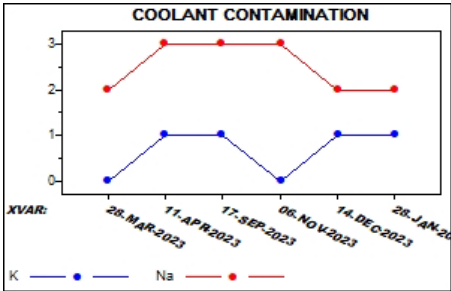
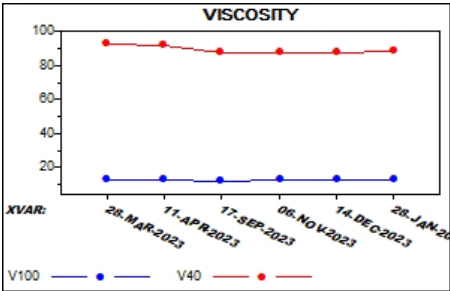
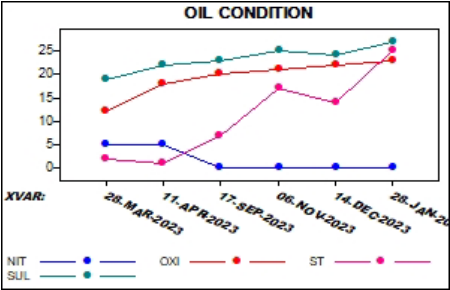
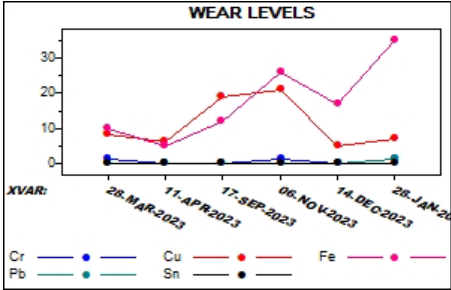
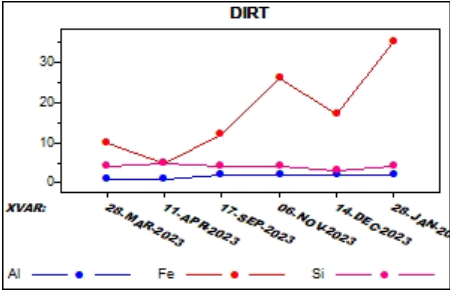
F	Fuel	N	N	N	N
---	------	---	---	---	---

## FUEL DILUTION (%) ASTM D7593

PFc	Percent Fuel	3.35	3.01	3.15	2.24
-----	--------------	------	------	------	------

## CLEANLINESS

		28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
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=4h8bREJvUrs>

## HYDRAULIC SYSTEM

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

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

T010-54031-0114

LABEL#: 3

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

## SAMPLE INFORMATION



Sampled Date	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54031-0114	T010-53312-0517	T010-53090-0304
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	6516.0	5992.0	5496
Comp Meter [Hr]	6515.0		
Meter On Fluid	524.0	1985.0	1489
Fluid Brand	CAT	CAT	
Fluid Weight	10W	10W	
Fluid Type	HYDO ADVANCED	HYDO ADVANCED	
Fluid Change	N	Y	N
Filter Change	N	Y	N
Total Fluid Added	0	0	0

## WEAR LEVELS / ADDITIVES

28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	10	13	11
Fe	Iron	12	14	10
Cr	Chromium	1	1	1
Al	Aluminum	8	8	5
Pb	Lead	1	1	1
Sn	Tin	0	0	0
Si	Silicon	22	29	24
Na	Sodium	2	3	2
K	Potassium	3	3	2
Mo	Molybdenum	10	18	16
Ni	Nickel	0	0	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	678	1020	941
P	Phosphorus	557	583	572
Zn	Zinc	755	764	705
Mg	Magnesium	157	253	216
Ba	Barium	0	0	0
B	Boron	37	58	58

## PREVIOUS SAMPLE

SILICON IS SLIGHTLY HIGH. THE OIL VISCOSITY @40C IS HIGHER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. TRACE AMOUNT OF LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUND. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. SUGGEST CUT OPEN FILTER(S) AND INSPECT FOR DEBRIS. MONITOR COMPARTMENT FOR RISING OIL LEVEL. CHECK FOR LEAKS. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. RECOMMEND SCHEDULE UNIT FOR INSPECTION ASAP. AFTER INSPECTION AND SERVICE, RESAMPLE AT HALF THE RECOMMENDED INTERVAL TO RE-EVALUATE CONDITION. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

28-Jan-24 06-Nov-23 28-Mar-23

## VISCOSITY (CENTISTOKES) ASTM D445

V40	Viscosity at 40 C	53.68	63.33	64.79
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## INFRARED (UFM) ASTM E2412

OXI	Oxidation	5	6	5
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## WATER - HOTPLATE

W	Water	N	N	N
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## CLEANLINESS

28-Jan-24 06-Nov-23 28-Mar-23

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

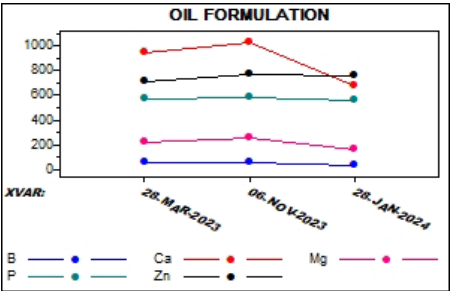
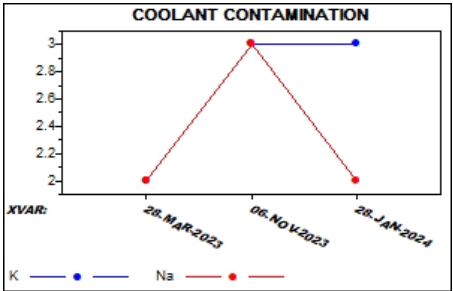
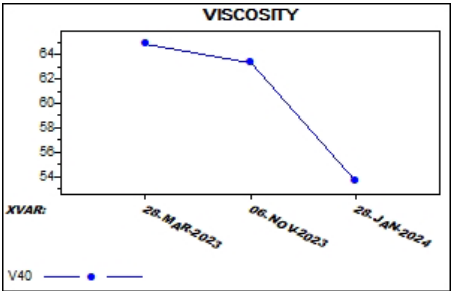
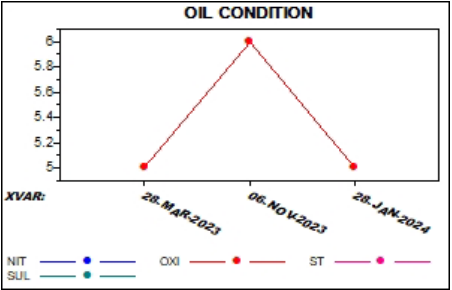
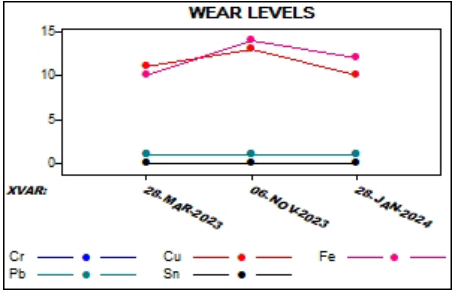
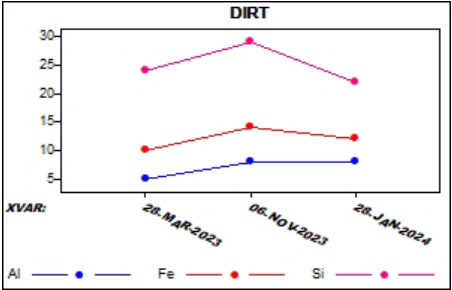
ISO	ISO Code Rating	19/14/11	20/13/10	19/15/11
4μ	4μ	3291	7239	3539
6μ	6μ	127	73	206
14μ	14μ	11	7	17

## FERROUS DEBRIS

PQI	PQ Index	0	0	0
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## VISUAL INSPECTION

DEP	DEP	N	C1	A1
DEP2	DEP2	N	DEB	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>



## FINAL DRIVE REAR LEFT

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Tom Cokalis

Interpreted On: 01-Feb-24

T010-54031-0135

LABEL#: 4

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

## SAMPLE INFORMATION



	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54031-0135	T010-53312-0535	T010-53090-0323
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	6516.0	5992.0	5496
Comp Meter [Hr]	6515.0		
Meter On Fluid	524.0	1985.0	1489
Fluid Brand	CAT	CAT	
Fluid Weight	60	60	
Fluid Type	FDAO	FDAO	
Fluid Change	N	Y	N
Filter Change	U	NA	N
Total Fluid Added	0	0	0

## WEAR LEVELS / ADDITIVES

28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	0	0	0
Fe	Iron	24	36	16
Cr	Chromium	0	0	0
Al	Aluminum	0	1	1
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	6	39	38
Na	Sodium	3	1	0
K	Potassium	1	0	0
Mo	Molybdenum	0	2	2
Ni	Nickel	0	0	0
Ag	Silver	0	0	0
Ti	Titanium	0	0	0
V	Vanadium	0	0	0
Mn	Manganese	0	1	0
Cd	Cadmium	0	0	0
Ca	Calcium	732	3266	3000
P	Phosphorus	363	785	747
Zn	Zinc	205	1056	961
Mg	Magnesium	9	36	24
Ba	Barium	0	0	0
B	Boron	71	20	14

## PREVIOUS SAMPLE

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. 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. RESAMPLE IN 500 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

28-Jan-24 06-Nov-23 28-Mar-23

## VISCOSITY (CENTISTOKES) ASTM D445

V40	Viscosity at 40 C	268.7	153.2	184.8
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## INFRARED (UFM) ASTM E2412

OXI	Oxidation	8	7	6
-----	-----------	---	---	---

## WATER - HOTPLATE

W	Water	N	N	N
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## CLEANLINESS

28-Jan-24 06-Nov-23 28-Mar-23

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

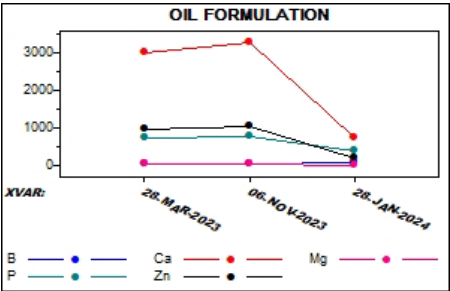
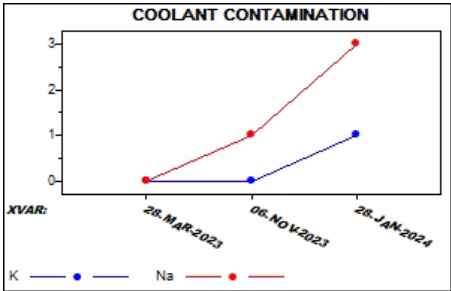
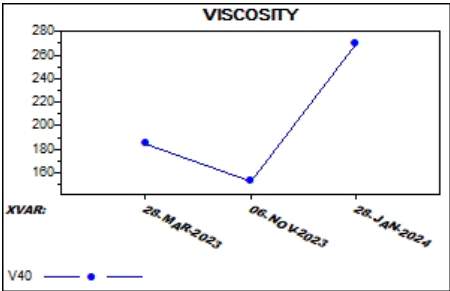
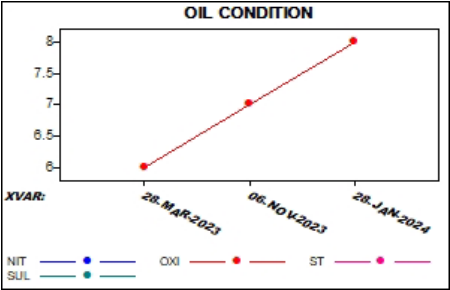
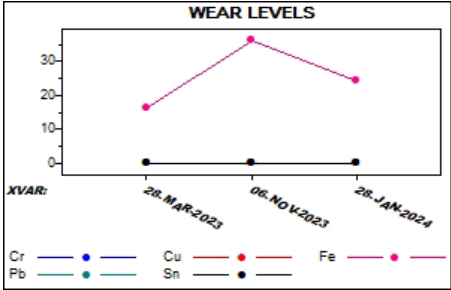
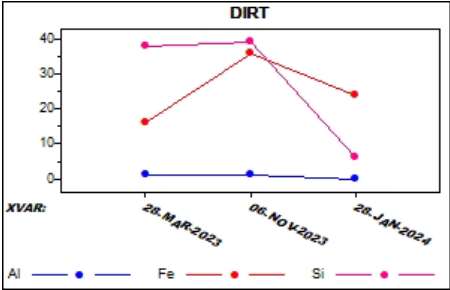
ISO	ISO Code Rating	19/16	20/14	21/17
6µ	6µ	4037	6245	18540
14µ	14µ	548	145	769

## FERROUS DEBRIS

PQI	PQ Index	1	6	3
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## VISUAL INSPECTION

DEP	DEP	N	N	A1
DEP2	DEP2	N	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>

## FINAL DRIVE REAR

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

## RIGHT

CAT D8T



No Action Required

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

T010-54031-0136

LABEL#: 5

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

## SAMPLE INFORMATION



	28-Jan-24	06-Nov-23	28-Mar-23
Sampled Date	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54031-0136	T010-53312-0536	T010-53090-7916
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	6516.0	5992.0	5496
Comp Meter [Hr]	6515.0		
Meter On Fluid	524.0	1985.0	1489
Fluid Brand	CAT	CAT	
Fluid Weight	60	60	
Fluid Type	FDAO	FDAO	
Fluid Change	N	Y	N
Filter Change	N	NA	N
Total Fluid Added	0	0	0

## WEAR LEVELS / ADDITIVES

28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	0	0	0
Fe	Iron	24	32	14
Cr	Chromium	0	1	0
Al	Aluminum	0	1	1
Pb	Lead	1	0	0
Sn	Tin	0	0	0
Si	Silicon	5	22	25
Na	Sodium	3	1	1
K	Potassium	2	1	1
Mo	Molybdenum	0	1	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	0
Cd	Cadmium	0	0	0
Ca	Calcium	440	3087	3019
P	Phosphorus	263	759	790
Zn	Zinc	92	1016	976
Mg	Magnesium	6	31	30
Ba	Barium	0	0	0
B	Boron	67	12	11

## PREVIOUS SAMPLE

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. 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. RESAMPLE IN 500 HOURS TO MONITOR. MORE SAMPLES NEEDED TO DEVELOP A TREND.

For additional sample history, go to:

[S.O.S WEB](#)

## CONDITION / CONTAMINATION

		28-Jan-24	06-Nov-23	28-Mar-23
VISCOSITY (CENTISTOKES) ASTM D445				
V40	Viscosity at 40 C	303.0	146.9	156.6

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	9	7	7
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## WATER - HOTPLATE

W	Water	N	N	N
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## CLEANLINESS

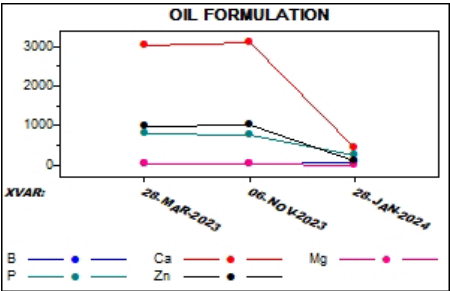
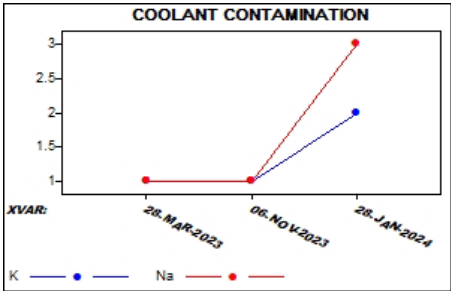
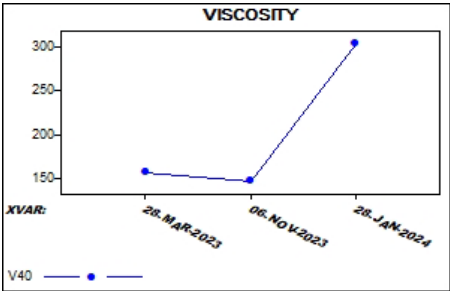
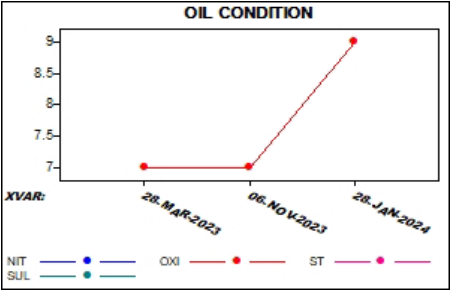
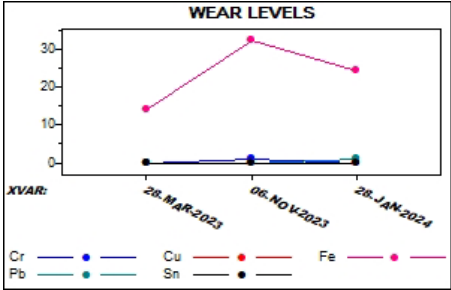
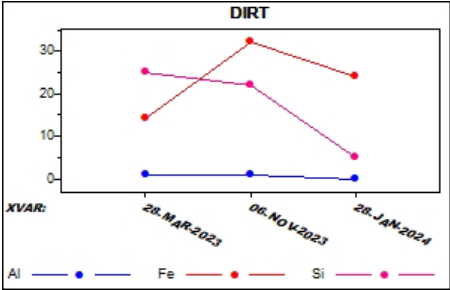
		28-Jan-24	06-Nov-23	28-Mar-23
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406				
ISO	ISO Code Rating	19/17	20/14	21/16
6µ	6µ	3304	6967	13842
14µ	14µ	738	94	556

## FERROUS DEBRIS

PQI	PQ Index	4	6	2
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## VISUAL INSPECTION

DEP	DEP	N	N	N
DEP2	DEP2	N	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>

## TRANSMISSION POWER

## SHIFT

T010-54031-0316

LABEL#: 6

SHOP JOB NUM : 8W37277

SAMPLE SHIP TIME (days) : 3

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 31-Jan-24

EQUIP NUM: D3

CAT D8T



No Action Required

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SERIAL NUMBER: JJ501379

Interp By: Tom Cokalis

Interpreted On: 05-Feb-24

## SAMPLE INFORMATION

	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54031-0316	T010-53312-0523	T010-53090-0116
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	6516.0	5992.0	5496
Comp Meter [Hr]	6515.0		
Meter On Fluid	524.0	1003.0	
Fluid Brand	CAT	CAT	
Fluid Weight	30	30	
Fluid Type	TDTO	TDTO	
Fluid Change	N	Y	N
Filter Change	Y	Y	Y
Total Fluid Added	0	0	0

## WEAR LEVELS / ADDITIVES

		28-Jan-24	06-Nov-23	28-Mar-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu	Copper	1	1	1
Fe	Iron	6	9	4
Cr	Chromium	0	0	0
Al	Aluminum	1	1	1
Pb	Lead	0	0	0
Sn	Tin	0	0	0
Si	Silicon	3	6	6
Na	Sodium	1	2	1
K	Potassium	0	0	0
Mo	Molybdenum	0	1	1
Ni	Nickel	0	0	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	2924	3203	2947
P	Phosphorus	868	842	853
Zn	Zinc	1153	1100	1005
Mg	Magnesium	24	63	59
Ba	Barium	0	0	0
B	Boron	11	35	35

## 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

		28-Jan-24	06-Nov-23	28-Mar-23
VISCOSITY (CENTISTOKES) ASTM D445				
V40	Viscosity at 40 C	89.94	82.71	83.34

## INFRARED (UFM) ASTM E2412

OXI	Oxidation	5	6	6
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## WATER - HOTPLATE

W	Water	N	N	N
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## CLEANLINESS

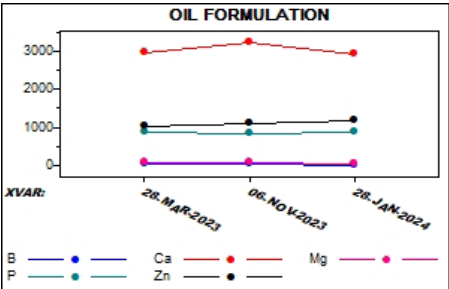
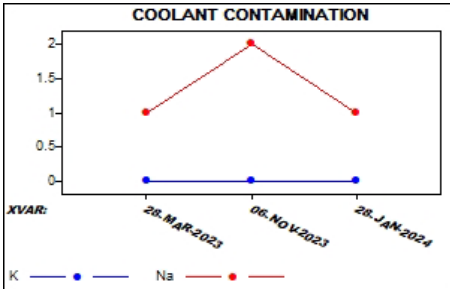
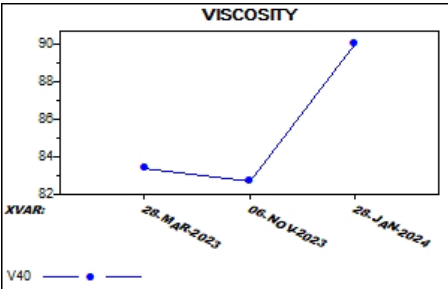
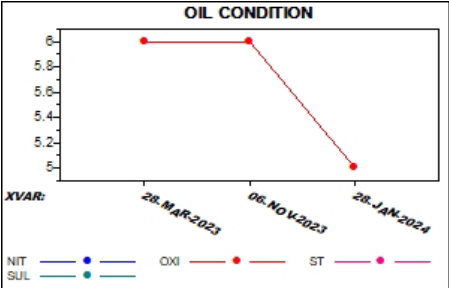
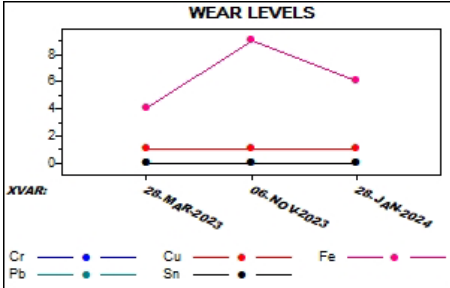
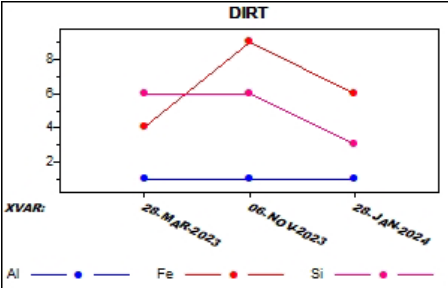
		28-Jan-24	06-Nov-23	28-Mar-23
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406				
ISO	ISO Code Rating	19/16/13	19/14/10	18/17/16
4μ	4μ	2819	2542	2225
6μ	6μ	374	109	730
14μ	14μ	45	10	377

## FERROUS DEBRIS

PQI	PQ Index	0	0	0
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## VISUAL INSPECTION

DEP	DEP	N	N	N
DEP2	DEP2	N	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>



ENGINE

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

T010-54066-0224  
SHOP JOB NUM : WGI2403  
SAMPLE SHIP TIME (days) : 5  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: BOGONG  
RECEIVED DATE: 06-Mar-24

CAT D8T  
 No Action Required

Interp By: Barry Swindells  
Interpreted On: 07-Mar-24

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SAMPLE INFORMATION				
Sampled Date	01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
Sample Id	T010-54066-0224	T010-54031-0208	T010-53352-0410	T010-53312-0411
Lab Date	06-Mar-24	31-Jan-24	18-Dec-23	08-Nov-23
Meter [Hr]	6789	6516.0	6278.0	5992.0
Comp Meter [Hr]	6789	6515.0		
Meter On Fluid	273.0	524.0	286.0	496.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO ULS	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)
Fluid Change	N	Y	N	Y
Filter Change	N	Y	N	Y
Make Up Fluid [L]			0.0	
Total Fluid Added	0	0.0	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					
		01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.22	12.50	12.37	12.31
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	86.37	88.46	87.26	87.69

VISCOSITY INDEX					
VI	Viscosity Index	136	137	138	135

INFRARED (UFM) ASTM E2412					
ST	Soot	12	25	14	17
OXI	Oxidation	21	23	22	21
SUL	Sulfur Products	25	27	24	25
NIT	Nitration	0	0	0	0

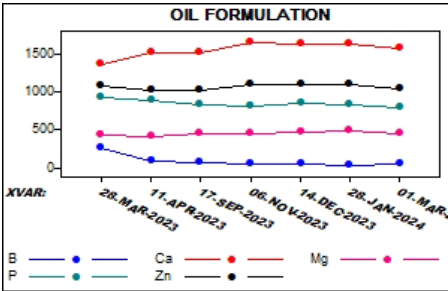
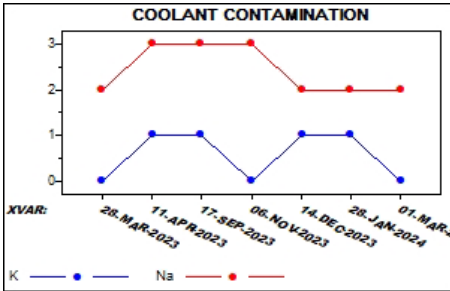
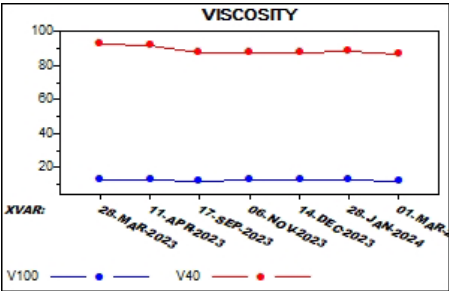
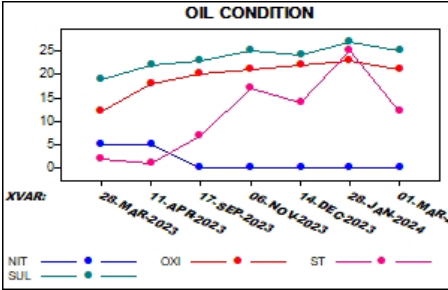
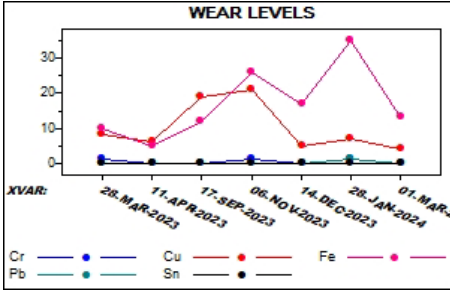
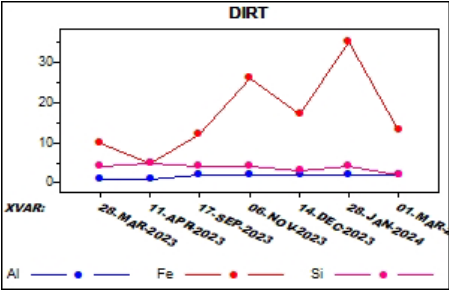
WATER - HOTPLATE					
W	Water	N	N	N	N

FUEL DILUTION (SCREEN)					
F	Fuel	N	N	N	N

FUEL DILUTION (%) ASTM D7593					
PFc	Percent Fuel	2.34	3.35	3.01	3.15

CLEANLINESS					
		01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
FERROUS DEBRIS					
PQI	PQ Index	0	0	0	0

WEAR LEVELS / ADDITIVES					
		01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]					
Cu	Copper	4	7	5	21
Fe	Iron	13	35	17	26
Cr	Chromium	0	1	0	1
Al	Aluminum	2	2	2	2
Pb	Lead	0	1	0	0
Sn	Tin	0	0	0	0
Si	Silicon	2	4	3	4
Na	Sodium	2	2	2	3
K	Potassium	0	1	1	0
Mo	Molybdenum	37	39	40	39
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	1	0	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1565	1639	1623	1641
P	Phosphorus	794	825	856	821
Zn	Zinc	1037	1089	1089	1090
Mg	Magnesium	459	482	478	445
Ba	Barium	0	0	0	0
B	Boron	44	40	48	55



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: D3  
CAT D8T  
SERIAL NUMBER: JJ501379

T010-54101-2012  
LABEL#: 2  
SHOP JOB NUM : 8W37595  
SAMPLE SHIP TIME (days) : 4  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: BOGONG  
RECEIVED DATE: 10-Apr-24



Action Required

LIGHT QUANTITY OF OIL IDENTIFIED IN SAMPLE, WEAR LEVELS REMAIN HIGH, WAS A SAMPLING GUN USED FOR THE OIL  
SAMPLES USED TO SAMPLE THIS COOLANT AS WELL? ENSURE SAMPLING PUMP IS CLEAN FREE FROM OIL AND DEBRIS.  
ENSURE CORRECT SAMPLING TECHNIQUE IS FOLLOWED TO AVOID MISLEADING RESULTS. RESAMPLE AT THE NEXT  
ENGINE SERVICE.

Interp By: Barry Swindells  
Interpreted On: 16-Apr-24

SAMPLE INFORMATION



Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54101-2012	T010-54031-2009	T010-53312-2043	T010-53090-2013
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	7058.0	6516.0	5992.0	5496
Comp Meter [Hr]	7058.0	6515.0		
Meter On Fluid	7058.0	6516.0	5992.0	5496
Fluid Brand	CAT	CAT	CAT	
Fluid Weight				
Fluid Type	ELC ADVANCED	ELC ADVANCED	ELC ADVANCED	ELC
Fluid Change	N	N	N	N
Filter Change	N	N	NA	N
Total Fluid Added	0	0	0	0

PREVIOUS SAMPLE

IRON; ALUMINIUM; COPPER; ZINC; LEVELS ARE ELEVATED BUT HAVE BEGAN  
TO SUBSIDE. CHECK OPERATING TEMPERATURE. 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

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
ION CHROMATOGRAPHY (PPM) ASTM D4327				
CL Chloride	60	70	73	110
SO4 Sulfate	49	53	64	109

ADDITIONAL ANALYTES

TH	Total Hardness	21	23	27	33
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CORROSION LEVELS/ CHEMISTRY

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu Copper	14	21	32	61
Fe Iron	12	14	14	19
Pb Lead	0	0	0	0
Sn Tin	0	0	0	0
Al Aluminum	7	8	7	7
Zn Zinc	5	8	11	17
Na Sodium	3680	3544	3290	2762
K Potassium	267	307	313	477
Mo Molybdenum	483	502	496	423

ION CHROMATOGRAPHY (PPM) ASTM D4327				
NO2 Nitrite	638	619	200	24
NO3 Nitrate	227	302	157	100
GLO Glycolate	748	603	1324	1282

ADDITIONAL ANALYTES				
MoO4 Molybdate	805	837	826	706
BO3 Borate	3	3	1	2
SiO3 Silicate	41	46	47	62

REFRACTIVE INDEX

GL Glycol (%)	46	45	45	42
FP Freeze Point (°C)	-32	-31	-31	-28
BP Boil Point (°C)	106	106	106	105

pH

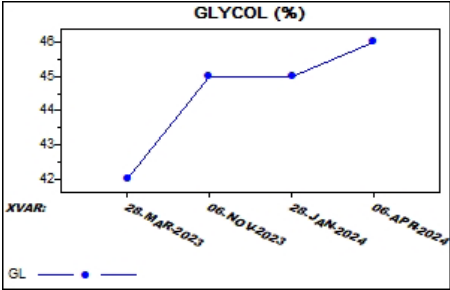
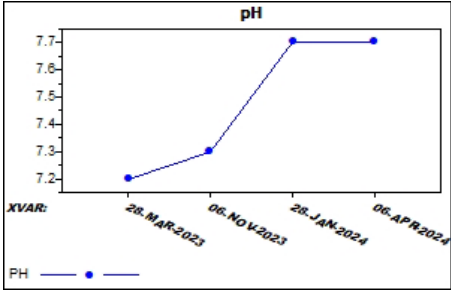
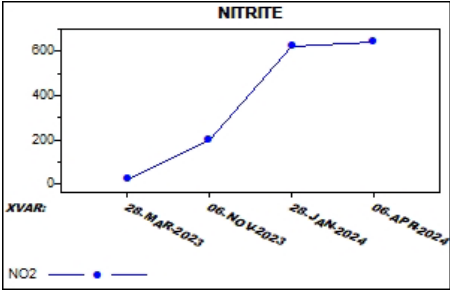
pH	pH	7.7	7.7	7.3	7.2
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CONDUCTIVITY (µS/cm)

CON	Conductivity	4481	3467	3553	4503
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PHYSICAL CHARACTERISTICS

		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
PHYSICALS					
Color	Color	red	red	red	orange
App	Appearance	clear	clear	clear	clear
Odor	Odor	norm	norm	norm	norm
Oil	Oil	light	none	none	none
Foam	Foam	norm	norm	norm	light
PAmt	Precip Amount	trace	trace	trace	moderate
PApp	Precip Appearance	granular	granular	granular	fine
PCol	Precip Color	blk sol	blk sol	blk sol	brn/blk sol
PProp	Precip Property	non-mag	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: D3

SERIAL NUMBER: JJ501379

T010-54101-0246  
LABEL#: 1  
SHOP JOB NUM : 8W37595  
SAMPLE SHIP TIME (days) : 4  
WHELANS GROUP  
INVESTMENTS PTY LTD  
LOCATION: BOGONG  
RECEIVED DATE: 10-Apr-24

CAT D8T  
 No Action Required

Interp By: Barry Swindells  
Interpreted On: 11-Apr-24

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SAMPLE INFORMATION				
Sampled Date	06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23
Sample Id	T010-54101-0246	T010-54066-0224	T010-54031-0208	T010-53352-0410
Lab Date	10-Apr-24	06-Mar-24	31-Jan-24	18-Dec-23
Meter [Hr]	7058.0	6789	6516.0	6278.0
Comp Meter [Hr]	7058.0	6789	6515.0	
Meter On Fluid	542.0	273.0	524.0	286.0
Fluid Brand	CAT	CAT	CAT	CAT
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	DEO ULS	DEO ULS	DEO-ULS(CJ-4)	DEO-ULS(CJ-4)
Fluid Change	Y	N	Y	N
Filter Change	Y	N	Y	N
Make Up Fluid [L]				0.0
Total Fluid Added	0	0	0.0	0.0

WEAR LEVELS / ADDITIVES				
	06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23
ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu Copper	7	4	7	5
Fe Iron	33	13	35	17
Cr Chromium	1	0	1	0
Al Aluminum	2	2	2	2
Pb Lead	3	0	1	0
Sn Tin	1	0	0	0
Si Silicon	3	2	4	3
Na Sodium	4	2	2	2
K Potassium	0	0	1	1
Mo Molybdenum	37	37	39	40
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	0
Cd Cadmium	0	0	0	0
Ca Calcium	1686	1565	1639	1623
P Phosphorus	918	794	825	856
Zn Zinc	1068	1037	1089	1089
Mg Magnesium	485	459	482	478
Ba Barium	0	0	0	0
B Boron	36	44	40	48

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

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

CONDITION / CONTAMINATION					
		06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23
VISCOSITY (CENTISTOKES) ASTM D445					
V100	Viscosity at 100 C	12.21	12.22	12.50	12.37
VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	85.17	86.37	88.46	87.26

VISCOSITY INDEX					
VI	Viscosity Index	138	136	137	138

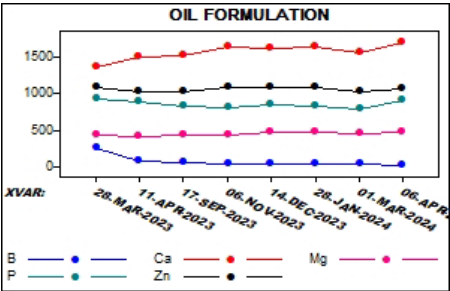
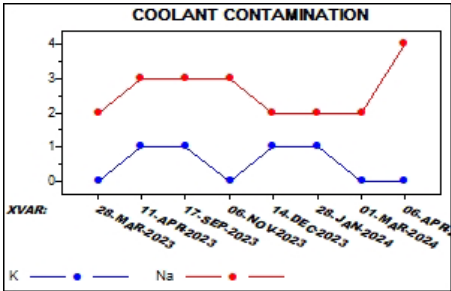
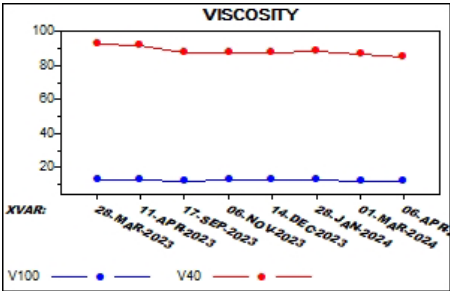
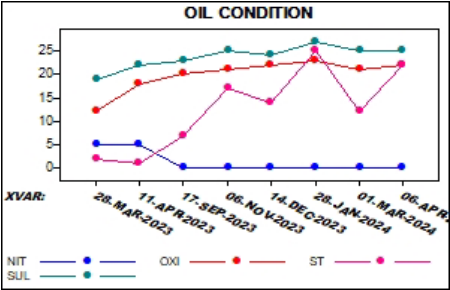
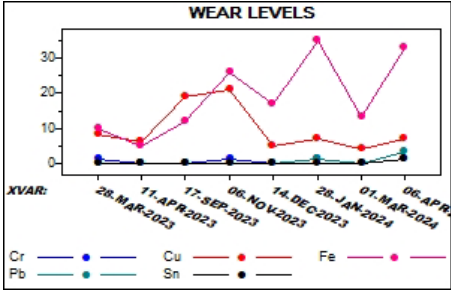
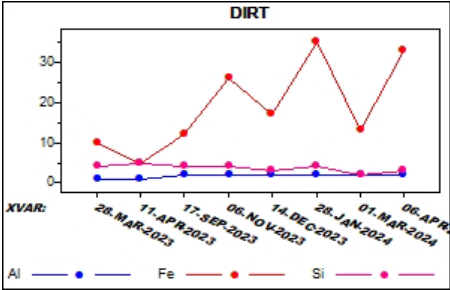
INFRARED (UFM) ASTM E2412					
ST	Soot	22	12	25	14
OXI	Oxidation	22	21	23	22
SUL	Sulfur Products	25	25	27	24
NIT	Nitration	0	0	0	0

WATER - HOTPLATE					
W	Water	N	N	N	N

FUEL DILUTION (SCREEN)					
F	Fuel	N	N	N	N

FUEL DILUTION (%) ASTM D7593					
PFc	Percent Fuel	3.55	2.34	3.35	3.01

CLEANLINESS					
		06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23
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=4h8bREJvUrs>



HYDRAULIC SYSTEM

EQUIP NUM: D3

SERIAL NUMBER: JJ501379

CAT D8T



Monitor Compartment

Interp By: Tom Cokalis  
Interpreted On: 12-Apr-24

SILICON AND ALUMINIUM ARE SLIGHTLY HIGH. CHECK FILTER MEDIUM AND SCREENS FOR WEAR MATERIAL AND  
CONTAMINATION. ALL OTHER TEST RESULTS APPEAR ACCEPTABLE. AFTER INSPECTION RESAMPLE AT THE NEXT  
SERVICE INTERVAL TO RE-EVALUATE CONDITION.

T010-54101-0723

LABEL#: 3

SHOP JOB NUM : 8W37595

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 10-Apr-24

SAMPLE INFORMATION



Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54101-0723	T010-54031-0114	T010-53312-0517	T010-53090-0304
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	7058.0	6516.0	5992.0	5496
Comp Meter [Hr]	7058.0	6515.0		
Meter On Fluid	1066.0	524.0	1985.0	1489
Fluid Brand	CAT	CAT	CAT	
Fluid Weight	10W	10W	10W	
Fluid Type	HYDO ADVANCED	HYDO ADVANCED	HYDO ADVANCED	
Fluid Change	N	N	Y	N
Filter Change	Y	N	Y	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

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
VISCOSITY (CENTISTOKES) ASTM D445				
V40 Viscosity at 40 C	53.39	53.68	63.33	64.79

INFRARED (UFM) ASTM E2412

OXI Oxidation	5	5	6	5
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WATER - HOTPLATE

W Water	N	N	N	N
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CLEANLINESS

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406				
ISO ISO Code Rating	17/12/9	19/14/11	20/13/10	19/15/11
4µ 4µ	1130	3291	7239	3539
6µ 6µ	40	127	73	206
14µ 14µ	3	11	7	17

FERROUS DEBRIS

PQI PQ Index	0	0	0	0
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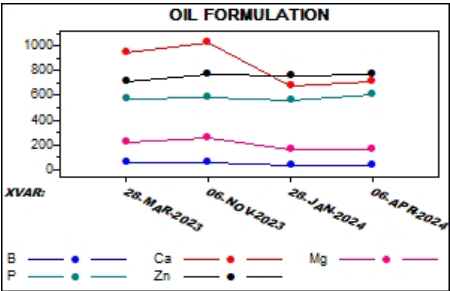
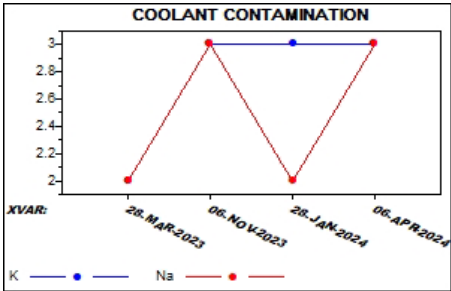
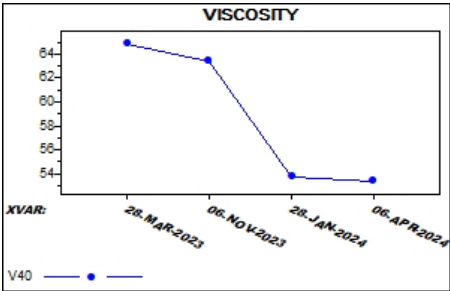
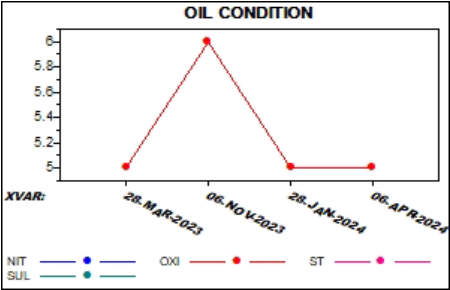
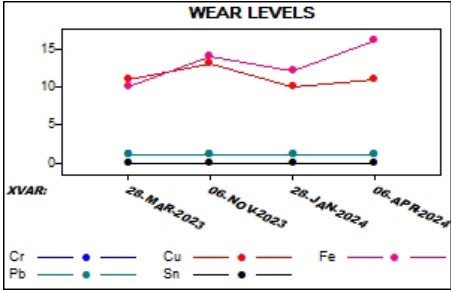
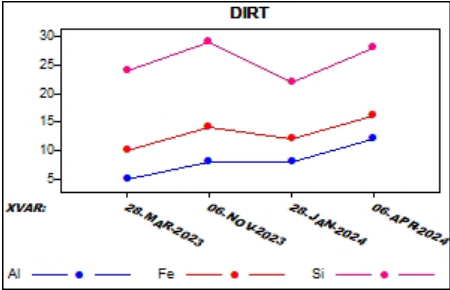
VISUAL INSPECTION

DEP DEP	N	N	C1	A1
DEP2 DEP2	N	N	DEB	DEB

WEAR LEVELS / ADDITIVES

06-Apr-24 28-Jan-24 06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]				
Cu Copper	11	10	13	11
Fe Iron	16	12	14	10
Cr Chromium	1	1	1	1
Al Aluminum	12	8	8	5
Pb Lead	1	1	1	1
Sn Tin	0	0	0	0
Si Silicon	28	22	29	24
Na Sodium	3	2	3	2
K Potassium	3	3	3	2
Mo Molybdenum	10	10	18	16
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	0	0
Cd Cadmium	0	0	0	0
Ca Calcium	707	678	1020	941
P Phosphorus	609	557	583	572
Zn Zinc	769	755	764	705
Mg Magnesium	165	157	253	216
Ba Barium	0	0	0	0
B Boron	37	37	58	58



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: D3

SERIAL NUMBER: JJ501379

CAT D8T



## Monitor Compartment

Interp By: Barry Swindells

Interpreted On: 11-Apr-24

T010-54101-0139

LABEL#: 4

SHOP JOB NUM : 8W37595

SAMPLE SHIP TIME (days) : 4

WHELANS GROUP

INVESTMENTS PTY LTD

LOCATION: BOGONG

RECEIVED DATE: 10-Apr-24

THE OIL VISCOSITY @ 40C IS LOWER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED OIL. INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR COMPARTMENT FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR OTHER ABNORMAL VISIBLE MATERIAL. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. WE WILL MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. RECOMMEND CHANGING OIL TO FLUSH THE COMPARTMENT. AFTER INSPECTION & SERVICE RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .

## SAMPLE INFORMATION



Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
Sample Id	T010-54101-0139	T010-54031-0135	T010-53312-0535	T010-53090-0323
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23
Meter [Hr]	7058.0	6516.0	5992.0	5496
Comp Meter [Hr]	7058.0	6515.0		
Meter On Fluid	1066.0	524.0	1985.0	1489
Fluid Brand	CAT	CAT	CAT	
Fluid Weight	60	60	60	
Fluid Type	FDAO	FDAO	FDAO	
Fluid Change	N	N	Y	N
Filter Change	N	U	NA	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

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>VISCOSITY (CENTISTOKES) ASTM D445</b>				
V40 Viscosity at 40 C	220.6	268.7	153.2	184.8

## INFRARED (UFM) ASTM E2412

OXI Oxidation	7	8	7	6
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## WATER - HOTPLATE

W Water	N	N	N	N
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## WEAR LEVELS / ADDITIVES

	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]</b>				
Cu Copper	0	0	0	0
Fe Iron	34	24	36	16
Cr Chromium	0	0	0	0
Al Aluminum	0	0	1	1
Pb Lead	0	0	0	0
Sn Tin	0	0	0	0
Si Silicon	4	6	39	38
Na Sodium	3	3	1	0
K Potassium	2	1	0	0
Mo Molybdenum	0	0	2	2
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	1	0	1	0
Cd Cadmium	0	0	0	0
Ca Calcium	1072	732	3266	3000
P Phosphorus	423	363	785	747
Zn Zinc	364	205	1056	961
Mg Magnesium	11	9	36	24
Ba Barium	0	0	0	0
B Boron	59	71	20	14

## CLEANLINESS

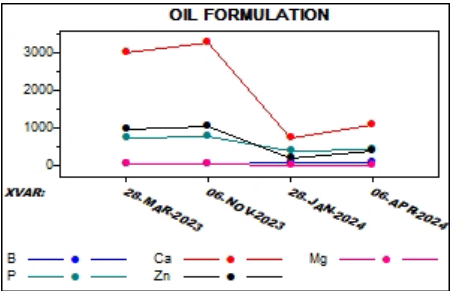
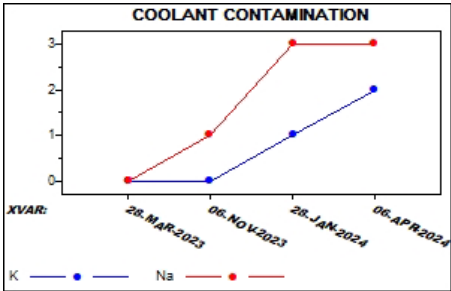
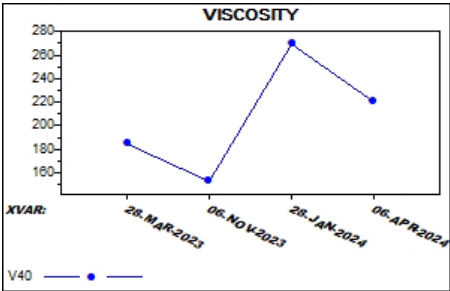
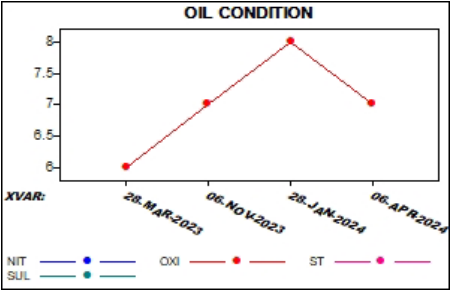
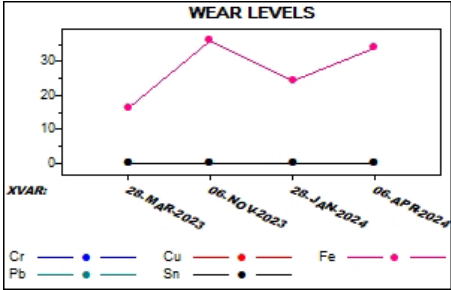
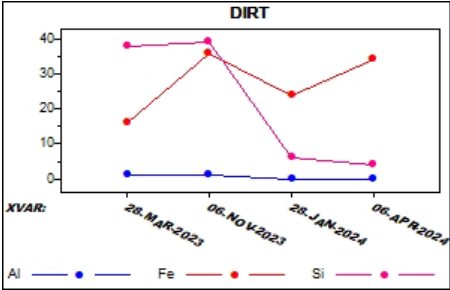
	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406</b>				
ISO ISO Code Rating	18/12	19/16	20/14	21/17
6µ 6µ	1736	4037	6245	18540
14µ 14µ	27	548	145	769

## FERROUS DEBRIS

PQI PQ Index	7	1	6	3
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## VISUAL INSPECTION

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



Report Comment

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