

PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



FINAL DRIVE REAR RIGHT

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 EQUIP NUM: D3

**SERIAL NUMBER: JJ501379** 

CAT D8T



**No Action Required** 

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

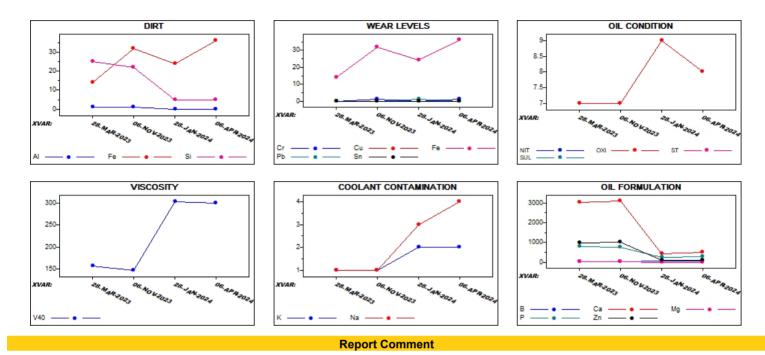
	SAMPLE INFORMATION							
	1	1	1	-				
Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23				
Sample Id	T010-54101-0138	T010-54031-0136	T010-53312-0536	T010-53090-7916				
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23				
Meter [Hr]	7058.0	6516.0	5992.0	5496				
Comp Meter [Hr]	7058.0	6515.0						
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	Υ	N				
Filter Change	N	N	NA	N				
Total Fluid Added	0	0	0	0				

		PREVIOL	JS SAMPLE		
OIL RECOM	CONDITION  MENDED INTERVAL	SATISFACTORY,	CONTINUE	SAMPLING	AT THE
	For ac	Iditional sample history,	go to:	S.O.S WEE	3
		CONDITION /	CONTAMINA	TION	
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
VISC	OSITY (CENTISTO	KES) ASTM D445			
V40	Viscosity at 40	C 299.8	303.0	146.9	156.6
INFR/	ARED (UFM) ASTI	M E2412			
OXI	Oxidation	8	9	7	7

		WEAR LEV	/ELS / ADDI	TIVES		
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23	
ELEM	ENTAL ANALYSIS (PP	M) 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	
Мо	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	
Ва	Barium	0	0	0	0	
В	Boron	69	67	12	11	

WATE	R - HOTPLATE				
W	Water	N	N	N	N
		CLEAN	LINESS		
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
<b>PART</b>	ICLE COUNT - ISO 1117	1:1999 reported per	ISO 4406		
ISO	ISO Code Rating	19/13	19/17	20/14	21/16
6μ	6μ	2988	3304	6967	13842
14µ	14μ	60	738	94	556
FERR	OUS DEBRIS				
PQI	PQ Index	8	4	6	2
VISUA	AL INSPECTION				
DEP	DEP	N	N	N	N
DEP2	DEP2	N	N	N	N







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WATER - HOTPLATE



### 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

**SERIAL NUMBER: JJ501379** 

CAT D8T



No Action Required

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

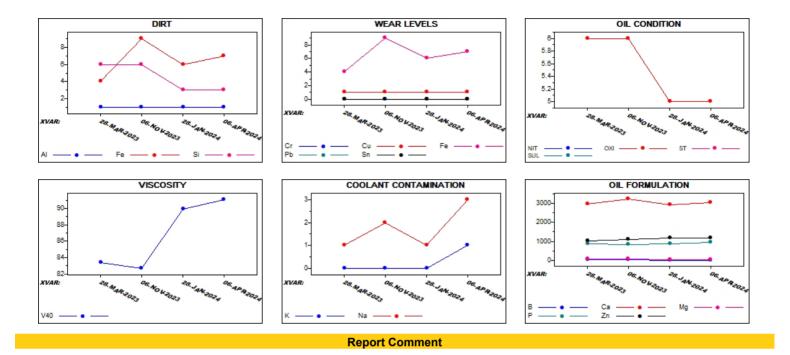
	SAMPLE INFORMATION								
Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23					
Sample Id	T010-54101-0113	T010-54031-0316	T010-53312-0523	T010-53090-0116					
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23					
Meter [Hr]	7058.0	6516.0	5992.0	5496					
Comp Meter [Hr]	7058.0	6515.0							
Meter 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	Υ	N	Υ	N					
Filter Change	Υ	Υ	Υ	Υ					
Total Fluid Added	0	0	0	0					

		PREVIOU	S SAMPLE			
OIL RECOM	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	ΑТ	THE
	For ad	ditional sample history, g	go to:	S.O.S WEB		
		CONDITION /	CONTAMINAT	TION		
		06-Apr-24	28-Jan-24	06-Nov-23	28-Ma	r-23
VISC	OSITY (CENTISTO	KES) ASTM D445				
V40	Viscosity at 40 0	91.04	89.94	82.71	83.34	4
INFR/	ARED (UFM) ASTN	M E2412				
OXI	Oxidation	5	5	6	6	

		WEAR LE\	/ELS / ADDI	TIVES		
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23	
ELEM	IENTAL ANALYSIS (PF	PM) ASTM D5185 [OIL]	/ ASTM D6130	[COOLANT]		
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	
Мо	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	
Ва	Barium	0	0	0	0	
В	Boron	12	11	35	35	

W	Water	N	N	N	N					
	CLEANLINESS									
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23					
PARTI	CLE COUNT - ISO 1117	1:1999 reported per	ISO 4406							
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					
	•									
FERR	OUS DEBRIS									
PQI	PQ Index	0	0	0	0					
VISUA	L INSPECTION									
DEP	DEP	N	N	N	N					
DEP2	DEP2	N	N	N	N					





Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or component

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VISCOSITY INDEX

### **ENGINE**

### T010-54214-0244

SHOP JOB NUM : WGI2407  ${\sf SAMPLE\ SHIP\ TIME\ (days): 3}$ 

# WHELANS GROUP INVESTMENTS PTY LTD

LOCATION: Mount Beauty
RECEIVED DATE: 01-Aug-24

### EQUIP NUM: D3 SERIAL NUMBER: JJ501379

CAT D8T



### **No Action Required**

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

Interp By: Barry Swindells Interpreted On: 05-Aug-24

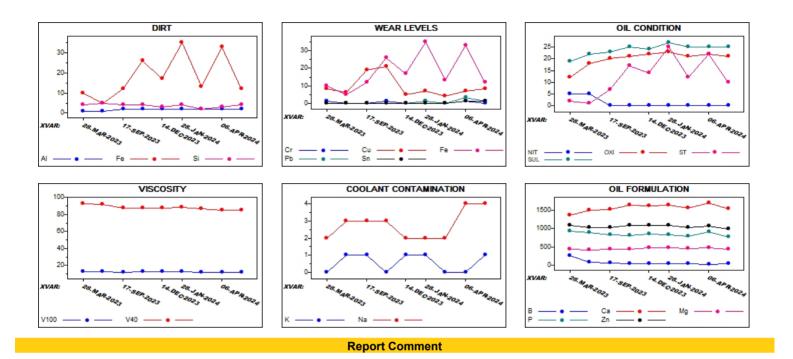
SAMPLE INFORMATION								
Sampled Date	29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24				
Sample Id	T010-54214-0244	T010-54101-0246	T010-54066-0224	T010-54031-0208				
Lab Date	01-Aug-24	10-Apr-24	06-Mar-24	31-Jan-24				
Meter [Hr]	7357.0	7058.0	6789	6516.0				
Comp Meter [Hr]		7058.0	6789	6515.0				
Meter 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	Υ	N	Υ				
Filter Change	N	Υ	N	Υ				
Total Fluid Added	0	0	0	0.0				

		PI	REVIOUS	SAMPLE				
O I L RECOM	CONDITION MENDED INTERVAL	SATISFAC	CTORY,	CONTINUE	SAMPLING	АТ	THE	
	For add	ditional sampl	le history, go	to:	S.O.S WEB			
	CONDITION / CONTAMINATION							
		2	29-Jul-24	06-Apr-24	01-Mar-24	28-Jan	-24	
VISCO	SITY (CENTISTO	KES) ASTM [	0445					
V100	Viscosity at 100	С	12.18	12.21	12.22	12.50	)	
VISCO	SITY (CENTISTO	KES) ASTM [	0445					
V40	Viscosity at 40 C	•	85.21	85.17	86.37	88.46	5	

	WEAR LEVELS / ADDITIVES						
		29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24		
ELEMI	ENTAL 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		
Κ	Potassium	1	0	0	1		
Мо	Molybdenum	38	37	37	39		
Ni	Nickel	0	0	0	0		
Ag	Silver	0	0	0	0		
Τi	Titanium	0	0	0	0		
V	Vanadium	0	0	0	0		
Mn	Manganese	0	0	0	1		
Cd	Cadmium	0	0	0	0		
Са	Calcium	1544	1686	1565	1639		
Þ	Phosphorus	778	918	794	825		
Zn	Zinc	995	1068	1037	1089		
Иg	Magnesium	445	485	459	482		
За	Barium	0	0	0	0		
В	Boron	48	36	44	40		

VISCO	DSITY INDEX				
VI	Viscosity Index	138	138	136	137
INFR/	ARED (UFM) ASTM E2412	2			
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
WATE	R - HOTPLATE				
W	Water	N	N	N	N
FIIFI	DILUTION (SCREEN)				
F	Fuel	N	N	N	N
FUEL	DILUTION (%) ASTM D75				
PFc	Percent Fuel	2.99	3.55	2.34	3.35
		CLEAN	LINESS		
		29-Jul-24	06-Apr-24	01-Mar-24	28-Jan-24
FERR	OUS DEBRIS				
PQI	PQ Index	0	0	0	0





Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or component

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### **RADIATOR**

### **EQUIP NUM: D3** CAT D8T

### **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

## **Monitor Compartment**

Interp By: Barry Swindells Interpreted On: 20-Jun-25

> LEVELS REMAIN HIGH SED TO SAMPLE THIS

27

23

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 WE WILL CONTINUE TO OPERATING ACCORDING MANUFACTURERS SPECIFICATION. MONITOR COOLANT 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.

ADDITIONAL ANALYTES

Total Hardness

	SAMPLE INFORMATION						
		$\triangle$	1	$\triangle$			
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			

	LIGHT	QUANTITY OF OIL	IDENTIFIED	IN SAMPLE,	WEAR	LEVELS	REMAIN	HIGH,		
	WAS A	SAMPLING GUN	USED FOR	THE OIL SA	MPLES US	SED TO	SAMPLE	THIS		
043	COOLAN	T AS WELL?	ENSURE SAM	IPLING PUMP	IS CLE	AN FRE	E FROM	OIL		
	AND I	DEBRIS. ENSUR	E CORRECT	SAMPLING	TECHNIQUE	IS I	FOLLOWED	ТО		
	AVOID MISLEADING RESULTS. RESAMPLE AT THE NEXT ENGINE SERVICE.									
		For additio	nal sample histor	y, go to:	\$	S.O.S WE	В			
	ADDITIONAL CHARACTERISTICS									
			08-Jun-2	5 06-Apr	-24 28	3-Jan-24	06-Nov	/-23		
D	ION C	HROMATOGRAPHY (	PPM) ASTM D43	27						
.0	CL	Chloride	57	60		70	73			
	SO4	Sulfate	51	49		53	64			

		CORROSION	LEVELS/ CH	EMISTRY				
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23			
ELEM	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			
Мо	Molybdenum	547	483	502	496			

REFRA	ACTIVE INDEX				
GL	Glycol (%)	50	46	45	45
FP	Freeze Point (°C)	-37	-32	-31	-31
BP	Boil Point (°C)	107	106	106	106
рН					
рН	pН	7.5	7.7	7.7	7.3
COND	UCTIVITY (µS/cm)				
CON	Conductivity	4453	4481	3467	3553

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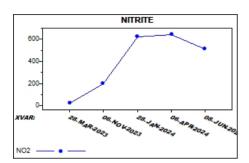
22

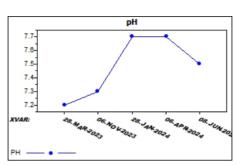
PREVIOUS SAMPLE

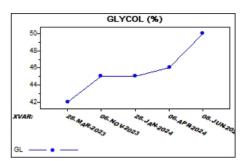
ION CH	ION CHROMATOGRAPHY (PPM) ASTM D4327							
NO2	Nitrite	511	638	619	200			
NO3	Nitrate	270	227	302	157			
GLO	Glycolate	873	748	603	1324			
ADDITI	ONAL ANALYTES							
MoO4	Molybdate	912	805	837	826			
MoO4 BO3	Molybdate Borate	912 0	805	837 3	826 1			

	PHYSICAL CHARACTERISTICS								
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23				
PHYSI	CALS								
Color	Color	orange	red	red	red				
Арр	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 Appearanc	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**

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### HYDRAULIC SYSTEM

### T010-55163-0108

LABEL#: 258853297 SHOP JOB NUM: 2w94131

SAMPLE SHIP TIME (days): 4 WHELANS GROUP

INVESTMENTS PTY LTD RECEIVED DATE: 12-Jun-25

## **EQUIP NUM: D3**

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### CAT D8T **Monitor Compartment**

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells Interpreted On: 16-Jun-25

THE OIL

SILICON AND ALUMINIUM ARE SLIGHTLY HIGH. THE SILICON AND ALUMINIUM INDICATE SLIGHT DIRT ENTRY. 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 .

OXI Oxidation

SAMPLE INFORMATION						
		2				
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	Υ		
Filter Change	N	Υ	N	Υ		
Total Fluid Added	0	0	0	0		

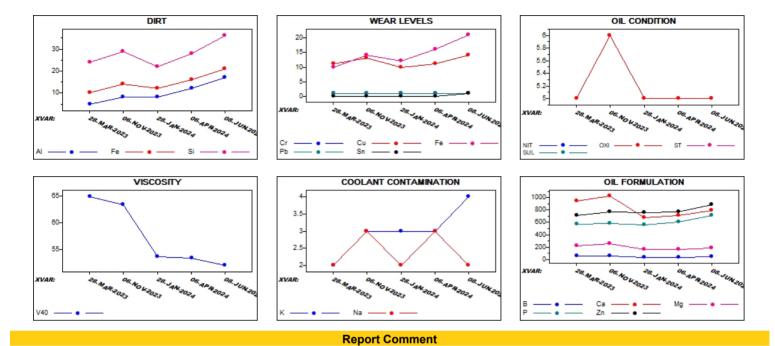
SILICON	AND	ALUMINIUM	ARE	SLIGHTLY	HIGH	CHECK	FILTER	MEDI	UM AND
SCREENS	FOR	WEAR	MATERIA	L AND	CONT	AMINATION.	ALL	OTHE	R TEST
RESULTS	APP	EAR ACCI	EPTABLE.	AF.	TER	INSPECTION	RESAME	PLE /	AT THE
NEXT SER	IEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION .								
For additional sample history, go to: S.O.S WEB									

PREVIOUS SAMPLE

CONDITION / CONTAMINATION								
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23			
VISC	VISCOSITY (CENTISTOKES) ASTM D445							
V40	Viscosity at 40 C	52.10	53.39	53.68	63.33			
INFR/	ARED (UFM) ASTM E241	2						

		WEAR LE	VELS / ADDIT	<b>TIVES</b>		
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23	
ELEM	ENTAL ANALYSIS (PPI	M) ASTM D5185 [OIL	] / ASTM D6130	[COOLANT]		
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	
Мо	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	
Р	Phosphorus	712	609	557	583	
Zn	Zinc	887	769	755	764	
Mg	Magnesium	185	165	157	253	
Ва	Barium	0	0	0	0	
В	Boron	41	37	37	58	

WATER	WATER - HOTPLATE								
W	Water	N	N	N	N				
		CLEAN	LINESS						
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23				
PARTIC	LE COUNT - ISO 11171:19	999 reported per	ISO 4406						
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				
<b>FERRO</b>	US DEBRIS								
PQI	PQ Index	0	0	0	0				
VISUAL	INSPECTION								
DEP	DEP	N	N	N	C1				
DEP2	DEP2	N	N	N	DEB				



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Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

WATER - HOTPLATE Water

### TRANSMISSION POWER

### SHIFT

### T010-55163-0120

LABEL#: 258853847 SHOP JOB NUM : 2w94131

WHELANS GROUP INVESTMENTS PTY LTD RECEIVED DATE: 12-Jun-25

Total Fluid Added

SAMPLE SHIP TIME (days): 4

## EQUIP NUM: D3

### CAT D8T



### **No Action Required**

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

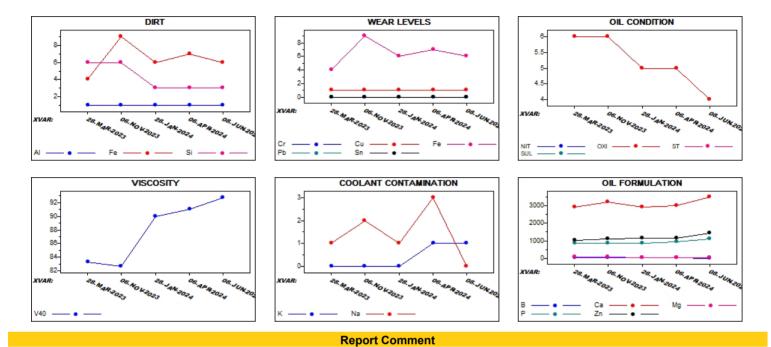
Interpreted On: 16-Jun-25

	5	SAMPLE INFORMA	TION		П
	1	1	-	1	(
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23	F
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	Υ	N	Υ	
Filter Change	Υ	Υ	Υ	Υ	
Total Fluid Added	0	0	0	0	

		PREVIOU	S SAMPLE				
OIL RECOM	CONDITION IMENDED INTERVAL		CONTINUE	SAMPLING	ΑТ	THE	
	For additional sample history, go to: S.O.S WEB						
	CONDITION / CONTAMINATION						
		08-Jun-25	06-Apr-24	28-Jan-24	06-No	ov-23	
VISC	OSITY (CENTISTO	KES) ASTM D445					
V40	Viscosity at 40 C	92.67	91.04	89.94	82.7	71	
INFR.	ARED (UFM) ASTM	E2412					
OXI	Oxidation	4	5	5	6		

	WEAR LEVELS / ADDITIVES							
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23			
ELEM	ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]							
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			
Мо	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			
Р	Phosphorus	1087	960	868	842			
Zn	Zinc	1428	1167	1153	1100			
Mg	Magnesium	16	23	24	63			
Ва	Barium	0	0	0	0			
В	Boron	5	12	11	35			

	CLEANLINESS							
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23			
PARTIC	LE COUNT - ISO 1117	1:1999 reported per	ISO 4406					
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			
FERRO	US DEBRIS							
PQI	PQ Index	0	0	0	0			
VISUAL	. INSPECTION							
DEP	DEP	N	N	N	N			
DEP2	DEP2	N	N	N	N			



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VISCOSITY INDEX

Viscosity Index

### **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

Interp By: Barry Swindells

Interpreted On: 16-Jun-25

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SAMPLE INFORMATION						
Sampled Date	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	Υ	N	Υ	N		
Filter Change	Υ	N	Υ	N		
Total Fluid Added	0	0	0	0		

		PREVIOL	JS SAMPLE				
OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	ΑТ	THE	
RECOM	MENDED INTERVAL						
	For additional sample history, go to: S.O.S						
	CONDITION / CONTAMINATION						
		08-Jun-25	29-Jul-24	06-Apr-24	01-M	ar-24	
VISC	OSITY (CENTISTO	KES) ASTM D445					
V100	Viscosity at 100	C 11.92	12.18	12.21	12.2	22	
VISC	OSITY (CENTISTO	KES) ASTM D445					
V40	Viscosity at 40 C	83.52	85.21	85.17	86.3	37	

138

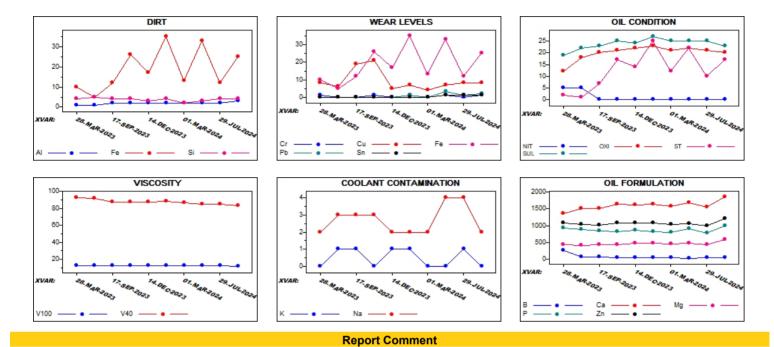
138

136

136

		WEAR LEV	ELS / ADDI	TIVES	
		08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24
ELEME	ENTAL ANALYSIS (P	PM) ASTM D5185 [OIL]	/ ASTM D6130	[COOLANT]	
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
Мо	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
Са	Calcium	1844	1544	1686	1565
Р	Phosphorus	1001	778	918	794
Zn	Zinc	1205	995	1068	1037
Mg	Magnesium	581	445	485	459
Ва	Barium	0	0	0	0
В	Boron	53	48	36	44

INFR4	ARED (UFM) ASTM E241	12						
ST	Soot	17	10	22	12			
OXI	Oxidation	20	21	22	21			
SUL	Sulfate By-Produc	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 D7	7593						
PFc	Percent Fuel	4.14	2.99	3.55	2.34			
CLEANLINESS								
		08-Jun-25	29-Jul-24	06-Apr-24	01-Mar-24			
FERR	OUS DEBRIS			r r				
PQI	PQ Index	0	0	0	0			



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### FINAL DRIVE REAR LEFT

T010-55163-0429 LABEL#: 258854198

SHOP JOB NUM: 2w94131 SAMPLE SHIP TIME (days): 4

WHELANS GROUP INVESTMENTS PTY LTD

RECEIVED DATE: 12-Jun-25

## **EQUIP NUM: D3**

### CAT D8T



### **Monitor Compartment**

**SERIAL NUMBER: JJ501379** 

Interp By: Barry Swindells

S.O.S WEB

153 2

268.7

Interpreted On: 17-Jun-25

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 CORRECT. MONITOR FOR RISING OIL LEVEL. INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR VISIBLE MATERIAL. CHECK & ENSURE THIS COMPARTMENT OPERATING CORRECTLY. OTHER ABNORMAL 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 .

Viscosity at 40 C

INFRARED (UFM) ASTM E2412

Oxidation

OXI

	SAMPLE INFORMATION							
		1	1					
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	Υ				
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 .

\_\_\_\_\_\_

**CONDITION / CONTAMINATION** 08-Jun-25 06-Apr-24 28-Jan-24 06-Nov-23 VISCOSITY (CENTISTOKES) ASTM D445

220.6

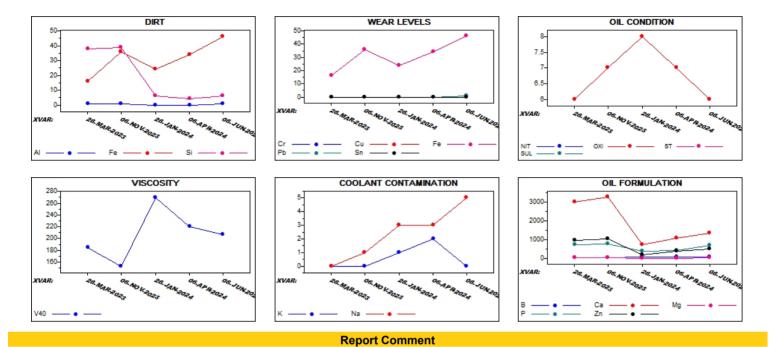
For additional sample history, go to:

206.5

6

**WEAR LEVELS / ADDITIVES** 06-Apr-24 28-Jan-24 06-Nov-23 08-Jun-25 ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL1 / ASTM D6130 [COOLANT] 0 Cu Copper 0 0 0 46 34 24 36 Fe Iron 1 0 0 0 Cr Chromium 1 n n 1 ΑI Aluminum 0 0 0 Pb Lead 0 0 0 0 Sn Tin 4 6 39 Si Silicon 5 3 3 1 Na Sodium 0 2 1 0 K Potassium 0 0 0 2 Mο Molvbdenum 0 0 0 0 Ni Nickel n O 0 O Ag 0 0 0 0 Ti Titanium 0 0 0 0 Vanadium Mn Manganese 1 0 1 n n O 0 Cadmium 1328 1072 732 3266 Ca Calcium 682 423 363 785 Phosphorus 507 364 205 1056 Zinc 11 13 9 36 Magnesium 0 0 0 0 Ba Barium 58 59 71 20 Boron

WATE	R - HOTPLATE				
W	Water	N	N	N	N
		CLEAN	INESS		
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
PARTI	CLE COUNT - ISO 1117	71:1999 reported per	ISO 4406		
ISO	ISO Code Rating	19/14	18/12	19/16	20/14
6μ	6μ	3609	1736	4037	6245
14µ	14µ	117	27	548	145
	·				
FERR	OUS DEBRIS				
PQI	PQ Index	5	7	1	6
VISUA	L INSPECTION				
DEP	DEP	A1	N	N	N
DEP2	DEP2	M-D	N	N	N



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### FINAL DRIVE REAR RIGHT

### T010-55163-0430

LABEL#: 258859223

SHOP JOB NUM : 2w94131 SAMPLE SHIP TIME (days): 4

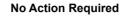
WHELANS GROUP

Filter Change

Total Fluid Added

INVESTMENTS PTY LTD RECEIVED DATE: 12-Jun-25

### EQUIP NUM: D3 CAT D8T



OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

NA

WATER - HOTPLATE Water

SERIAL NUMBER: JJ501379

Interp By: Barry Swindells

Interpreted On: 17-Jun-25

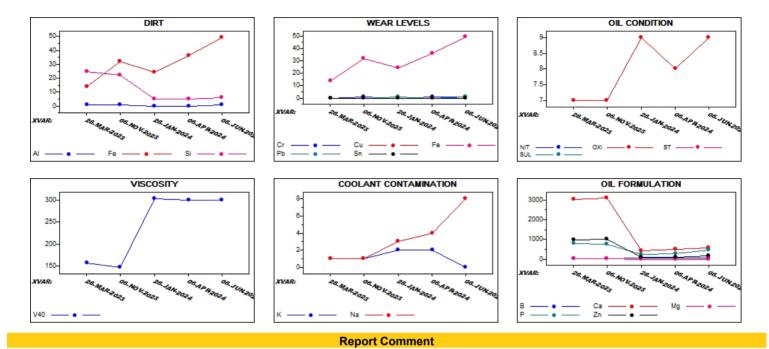
_		_					
	SAMPLE INFORMATION						
	1	1	1		C		
Sampled Date	08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23	R		
Sample Id	T010-55163-0430	T010-54101-0138	T010-54031-0136	T010-53312-0536			
Lab Date	12-Jun-25	10-Apr-24	31-Jan-24	08-Nov-23			
Meter [Hr]	7487	7058.0	6516.0	5992.0			
Comp Meter [Hr]		7058.0	6515.0				
Meter On Fluid		1066.0	524.0	1985.0			
Fluid Brand	CAT	CAT	CAT	CAT	١		
Fluid Weight	60	60	60	60			
Fluid Type	FDAO	FDAO	FDAO	FDAO			
Fluid Change	N	N	N	Υ			

		PREVIOUS	SSAMPLE				
OIL RECOM	CONDITION  IMENDED INTERVAL	SATISFACTORY, 	CONTINUE	SAMPLING	ΑТ	THE	
	For additional sample history, go to: S.O.S WEB						
	CONDITION / CONTAMINATION						
		08-Jun-25	06-Apr-24	28-Jan-24	06-No	ov-23	
VISC	OSITY (CENTISTO	KES) ASTM D445					
V40	Viscosity at 40 (	300.1	299.8	303.0	146	.9	
INFR/	ARED (UFM) ASTM	1 E2412					
OXI	Oxidation	9	8	9	7		

	WEAR LEVELS / ADDITIVES									
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23					
ELEM	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					
Мо	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					
Р	Phosphorus	478	273	263	759					
Zn	Zinc	157	110	92	1016					
Mg	Magnesium	8	6	6	31					
Ва	Barium	0	0	0	0					
В	Boron	78	69	67	12					

		CLEANL	INESS		
		08-Jun-25	06-Apr-24	28-Jan-24	06-Nov-23
PARTIC	CLE COUNT - ISO 1117				
ISO	ISO Code Rating	20/16	19/13	19/17	20/14
6μ	6μ	6018	2988	3304	6967
14μ	14μ	550	60	738	94
FERRO	OUS DEBRIS				
PQI	PQ Index	10	8	4	6
VISUA	L INSPECTION				
DEP	DEP	A1	N	N	N
DEP2	DEP2	M-D	N	N	N





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Clayton North, Vic 3168 Australia

PHONE: 03 9566 0666



Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

### RADIATOR

### T010-53312-2043

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



### **Action Required**

**SERIAL NUMBER: JJ501379** 

Interp By: Tom Cokalis
Interpreted On: 13-Nov-23

MODERATE AMOUNT OF BLACK & BROWN

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.

WEAR LEVELS APPEAR HIGH,

SAMPLE INFORMATION						
	$\triangle$					
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				

SOLID	NON-	-MAGN	IETIC	PAR	TICLES	PR	ESENT.	DI	EPOSI	TS	CAN	AC	CELEF	RATE
WEAR	OF	COC	DLING	SYS	TEM	COM	PONENT	rs	AND	M	٩Y	REDU	CE	THE
EFFICIENC	Y	OF	HEAT	TRA	NSFER	BY	BLOC	KING	PA	SSAG	ES	AND	COA	TING
SURFACES	3.	СН	ECK	FOR	LOCA	LIZED	OVER	HEATI	ING	OR	RES	TRICTE	ED F	LOW
IN THE	COC	DLING	SYST	EM.	CHE	CK RA	DIATOR	FIN	NS A	ARE	FREE	OF	DUST	- &
COOLANT	LE	VELS	INC	LUDING	OV	ERFLOV	1AT V	٧K	ARE	FIL	LED	TO	COR	RECT
LEVELS.		CHEC	CK :	SERVIC	E H	ISTOR	Y FO	R /	ANY	SCH	HEDUL	ED	INHIB	TOR
ADDITION	Α	ND	COOL	ANT	LIFE	TO	DETER	MINE	WI	HEN	REF	LACE	MENT	IS
NECESSA	RY.		AFTE	R SI	ERVICI	NG	RESAM	PLE	AT	N	EXT	MAII	NTENA	NCE
INTERVAL	TO CH	HECK C	OOLAN	IT CON	DITION.									

PREVIOUS SAMPLE

For additional sample history, go to: my.cat.com

<b>CORROSION LEVELS/</b>	CHEMISTRY
--------------------------	-----------

06-Nov-23 28-Mar-23

ELEME	ELEMENTAL ANALYSIS (PPM) ASTM DS183 [OIL] / ASTM DS130 [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					
Мо	Molybdenum	496	423					

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

ADDIT	IONAL ANALYTE	S	
MoO4	Molybdate	826	706
воз	Borate	1	2
SiO3	Silicate	47	62

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		

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

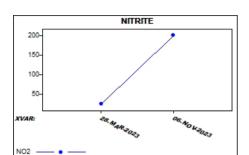
рн			
рН	pH	7.3	7.2

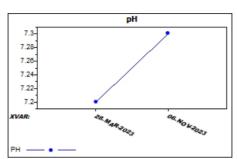
CONDU	ICTIVITY (µS/cm)			
CON	Conductivity	3553	4503	

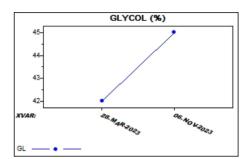
	PHYSICAL CHARACTERISTICS							
		06-Nov-23	28-Mar-23					
PHYSIC	CALS							
Color	Color	red	orange					
Арр	Appearance	clear	clear					
Odor	Odor	norm	norm					
Oil	Oil	none	none					
Foam	Foam	norm	light					
PAmt	Precip Amount	trace	moderate					
PApp	Precip Appearanc	granular	fine					
PCol	Precip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

CAT D8T









### **Report Comment**



### WILLIAM ADAMS PTY. LTD - William Adams Pty. Ltd. 17-55 Nantilla Road

Clayton North, Vic 3168 Australia

PHONE: 03 9566 0666 Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



RADIATOR

62

SiO3

Silicate

**SERIAL NUMBER: JJ501379** 

### 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

### EQUIP NUM: JJ501379



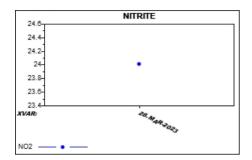
### **Monitor Compartment**

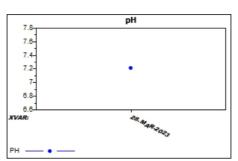
Interp By: Barry Swindells Interpreted On: 14-Apr-23

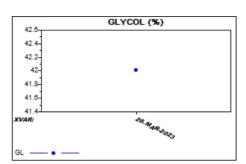
WEAR LEVELS APPEAR HIGH, MODERATE AMOUNT OF BLACK & BROWN SOLID NON-MAGNETIC PARTICLES PRESENT. DEPOSITS CAN ACCELERATE WEAR OF COOLING SYSTEM COMPONENTS AND MAY REDUCE THE EFFICIENCY OF HEAT TRANSFER BY BLOCKING PASSAGES AND COATING SURFACES. CHECK FOR LOCALIZED OVERHEATING OR RESTRICTED FLOW IN THE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

			ı					
			SAMPLE INFORMATION				PREVIOUS SAMPL	E
		1				For addition	al sample history, go to:	my.cat.com
Sample	ed Date	28-Mar-23				A	ADDITIONAL CHARACTI	ERISTICS
Sample	e Id	T010-53090-2013					28-Mar-23	
Lab Da	ate	31-Mar-23			ION C	HROMATOGRAPHY (P	PM) ASTM D4327	
Meter		5496			CL	Chloride	110	
	On Fluid	5496			SO4	Sulfate	109	
Fluid B								
Fluid V	-	ELC			ADDIT	IONAL ANALYTES		
Fluid T	• •	N			TH	Total Hardness	33	
Filter C	-	N				Total Hardiness		
	luid Added	0						
					REFR	ACTIVE INDEX		
					GL	Glycol (%)	42	
					FP	Freeze Point (°C)	-28	
					BP	Boil Point (°C)	105	
			ROSION LEVELS/ CHEMIS	STRY		()		
			8-Mar-23		рН			
		YSIS (PPM) ASTN	D5185 [OIL] / ASTM D6130 [COO	DLANT]	pН	pН	7.2	
Cu	Copper		61		pi i	pii		
Fe	Iron		19					
Pb	Lead		0		COND	UCTIVITY (µS/cm)		
Sn	Tin		7		COND		4503	
Al	Aluminum				CON	Conductivity	4303	
Zn	Zinc		17					
Na	Sodium		2762				PHYSICAL CHARACTE	RISTICS
K	Potassium		477				28-Mar-23	
Мо	Molybdenu	ım	423		PHYSI			
					Color	Color	orange	
ION C	HROMATOG	RAPHY (PPM) AS			App	Appearance	clear	
NO2	Nitrite		24		Odor	Odor	norm	
NO3	Nitrate		100		Oil	Oil	none	
GLO	Glycolate		1282		Foam	Foam	light	
					PAmt	Precip Amount	moderate	
ADDIT	IONAL ANAL	YTES			PApp	Precip Appearanc	fine	
MoO4	Molybdate		706		PCol	Precip Color	brn/blk sol	
ВО3	Borate		2		PProp	Precip Property	non-mag	

CAT D8T







### **Report Comment**



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



**ENGINE** 

T010-53090-0413

WHELANS GROUP INVESTMENTS PTY LTD LOCATION: BOGONG RECEIVED DATE: 31-Mar-23

SHOP JOB NUM: 8W35745

SAMPLE SHIP TIME (days) : 3

EQUIP NUM: JJ501379 **SERIAL NUMBER: JJ501379** 

### CAT D8T



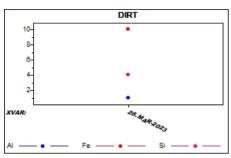
**No Action Required** 

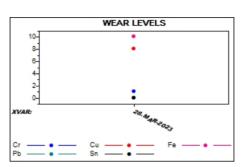
Interp By: Tom Cokalis Interpreted On: 05-Apr-23

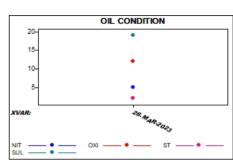
OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

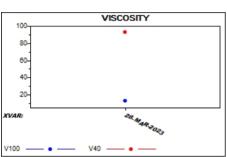
			•				
			SAMPLE INFORMATION			PREVIOUS SAMPLE	
					For addition	al sample history, go to:	my.cat.com
Sampl	led Date	28-Mar-23				CONDITION / CONTAMIN	IATION
Sampl		T010-53090-0413				28-Mar-23	
Lab Da	ate	31-Mar-23		VISC	OSITY (CENTISTOKES)	ASTM D445	
Meter		5496		V100	•	12.70	
	On Fluid	507			<b>,</b>		
Fluid E		CAT					
	Neight	15W-40		VISC	OSITY (CENTISTOKES)	ASTM DAAS	
Fluid T	Type Change	Υ		V40	Viscosity at 40 C	92.30	
	Change	Y		V+0	Viscosity at 40 C		
	Up Fluid []	43					
	luid Added	0		VICE	OSITY INDEX		
				VISC		134	
				VI	Viscosity Index	134	
			WEAR LEVELS / ADDITIVES	13.100		40	
			8-Mar-23		ARED (UFM) ASTM E24	2	
ELEM	ENTAL ANAL	YSIS (PPM) ASTN	D5185 [OIL] / ASTM D6130 [COOLANT]	ST	Soot	12	
Cu	Copper		8	OXI	Oxidation	19	
-e	Iron		10	SUL	Sulfur Products	5	
Cr	Chromium		1	NIT	Nitration	3	
<b>4</b> I	Aluminum		1				
Pb	Lead		0		ER - HOTPLATE	.,	
Sn	Tin		0	W	Water	N	
Si	Silicon		4				
Na	Sodium		2				
K	Potassium		0		DILUTION (SCREEN)		
Мо	Molybdenu	ım	65	F	Fuel	N	
Ni	Nickel		0				
Ag	Silver		0				
Ti	Titanium		0	FUEI	DILUTION (%) ASTM D	7593	
V	Vanadium		0	PFc	Percent Fuel	<2	
Mn	Manganes	е	0				
Cd	Cadmium		0			CLEANLINESS	
Са	Calcium		1368			28-Mar-23	
Р	Phosphoru	is	935	FERI	ROUS DEBRIS		
Zn	Zinc		1078	PQI	PQ Index	0	
Mg	Magnesiun	n	433				
Ва	Barium		0				
В	Boron		261				

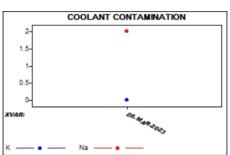


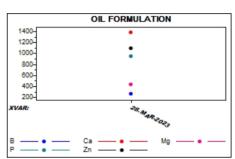








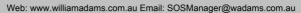




### **Report Comment**



PHONE: 03 9566 0666





### FINAL DRIVE REAR LEFT

T010-53090-0323

SHOP JOB NUM: 8W35745 SAMPLE SHIP TIME (days): 3

WHELANS GROUP
INVESTMENTS PTY LTD
LOCATION: BOGONG

RECEIVED DATE: 31-Mar-23

EQUIP NUM: JJ501379

SERIAL NUMBER: JJ501379





No Action Required

Interp By: Barry Swindells
Interpreted On: 05-Apr-23

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

DEVELOP A TREND

		SAMPLE INFORMATION
	1	
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	

		MPL	

For additional sample history, go to: 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

### WATER - HOTPLATE

W Water

### WEAR LEVELS / ADDITIVES

28-Mar-23

<b>ELEME</b>	NTAL ANALYSIS (PPM) ASTM	I 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	i
Мо	Molybdenum	2	
Ni	Nickel	0	
Ag	Silver	0	
Ti	Titanium	0	
V	Vanadium	0	
Mn	Manganese	0	
Cd	Cadmium	0	
Ca	Calcium	3000	
Р	Phosphorus	747	
Zn	Zinc	961	
Mg	Magnesium	24	
Ва	Barium	0	
В	Boron	14	

### CLEANLINESS

28-Mar-23

N

FARII	ICLE COUNT - ISO I	1 1 1 / 1. 1888 Teporteu per 130 44	JO
		21/17	

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

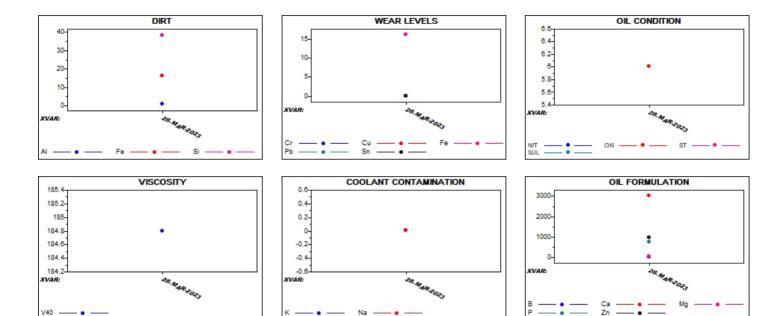
### FERROUS DEBRIS

PQI PQ Index

### VISUAL INSPECTION

DEP DEP A1
DEP2 DEP2 DEB





**Report Comment** 



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



**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

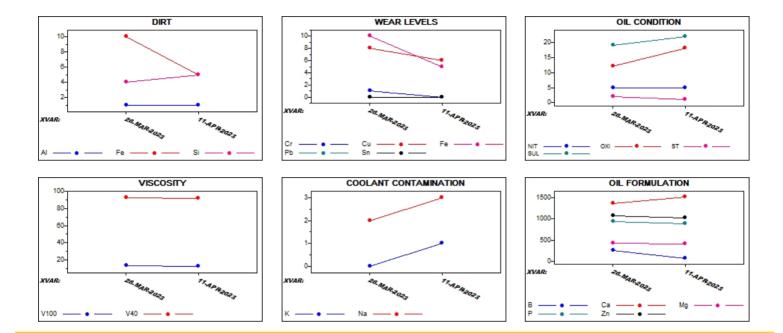
OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO

DEVELOP A TREND.

		SAMPLE INFORMATIO	N PREVIOUS SAMPLE	
			OIL CONDITION SATISFACTORY, CONTINUE SAMPLING	AT THE
Sampled Date	11-Apr-23	28-Mar-23	RECOMMENDED INTERVAL.	
Sample Id	T010-53104-0603	T010-53090-0413	For additional sample history, go to: my.cat.com	
Lab Date	14-Apr-23	31-Mar-23	CONDITION / CONTAMINATION	
Meter [Hr]	5561	5496		
Meter On Fluid	61	507		
Fluid Brand	CAT	CAT	VISCOSITY (CENTISTOKES) ASTM D445	
Fluid Weight	15W-40	15W-40	V100 Viscosity at 100 C 12.60 12.70	
Fluid Type				
Fluid Change	N	Υ		
Filter Change	N	Υ	VISCOSITY (CENTISTOKES) ASTM D445	
Make Up Fluid []	0	43	V40 Viscosity at 40 C 91.41 92.30	
Total Fluid Added	0	0	viologicy at 40 C	

				VISCO	OSITY INDEX		
		WEAR LE\	/ELS / ADDITIVES	VI	Viscosity Index	134	134
		11-Apr-23	28-Mar-23				
ELEMI	ENTAL ANALYSIS (PI	·	/ ASTM D6130 [COOLA				
Cu	Copper	6	8	INFR/	ARED (UFM) ASTM E241	2	
Fe	Iron	5	10	ST	Soot	1	2
Cr	Chromium	0	1	OXI	Oxidation	18	12
AI.	Aluminum	1	1	SUL	Sulfur Products	22	19
Pb P	Lead	0	0	NIT	Nitration	5	5
în	Tin	0	0				
Si	Silicon	5	4	WATE	R - HOTPLATE		
la	Sodium	3	2	W	Water	N	N
(	Potassium	1	0				
Ло	Molybdenum	40	65				
Ni	Nickel	0	0	FUEL	DILUTION (SCREEN)		
٨g	Silver	0	0	F	Fuel	N	N
Гі	Titanium	0	0				
/	Vanadium	0	0				
Mn	Manganese	0	0	FUEL	DILUTION (%) ASTM D7	593	
Cd	Cadmium	0	0	PFc	Percent Fuel	<2	<2
Ca	Calcium	1507	1368				
•	Phosphorus	886	935			CLEAN	INESS
'n	Zinc	1030	1078			11-Apr-23	28-Mar-23
Иg	Magnesium	420	433	FERR	OUS DEBRIS	117.p. 23	20 25
Ва	Barium	0	0	PQI	PQ Index	0	0
В	Boron	80	261				





**Report Comment** 



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



**ENGINE** 

T010-53263-0724

WHELANS GROUP

LOCATION: BOGONG
RECEIVED DATE: 20-Sep-23

Boron

SHOP JOB NUM: 8W36689

INVESTMENTS PTY LTD

SAMPLE SHIP TIME (days) : 3

EQUIP NUM: D3 SERIAL NUMBER: JJ501379

### CAT D8T



### **Monitor Compartment**

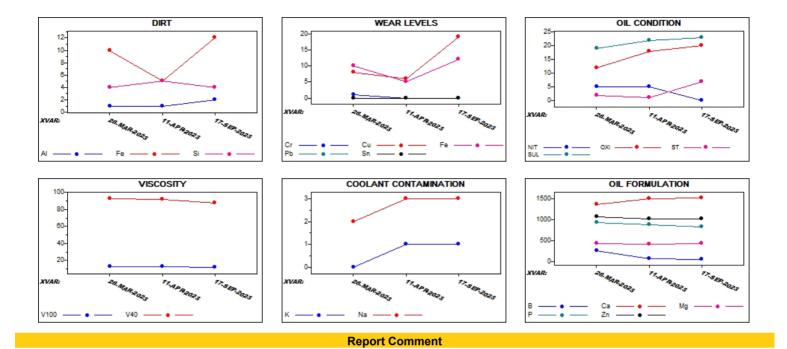
Interp By: Barry Swindells Interpreted On: 22-Sep-23

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.

			SAMPLE	<b>INFORMA</b>				PREVIOU	S SAMPLE			
		1	•		<b>*</b>	OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	ΑТ	Т
Sampl	ed Date	17-Sep-23	11-	Apr-23	28-Mar-23	RECOM	MENDED INTERVAL	MORE SAMPLES NEEDI	ED TO DEVELOP A	TREND.		
ampl	e ld	T010-53263-0724	T010-5	3104-0603	T010-53090-0413		For add	ditional sample history, g	go to:	my.cat.com		
ab D	ate	20-Sep-23		Apr-23	31-Mar-23			CONDITION /	CONTAMINAT	ION		
/leter		5720.0		561	5496			17-Sep-23	11-Apr-23	28-Mar-23		
	On Fluid	224.0		61	507	VISC	OSITY (CENTISTO					
	Brand	CAT		CAT	CAT		•		12.60	12.70		
	Veight	15W-40	15	W-40	15W-40	V100	Viscosity at 100	C 12.22	12.00	12.70		
luid 1	- 1	DEO-ULS(CJ-4)										
	Change	N		N	Y							
	Change	N		N	Y	VISC	OSITY (CENTISTO	KES) ASTM D445				
Иake	Up Fluid []	_		0	43	V40	Viscosity at 40 C	87.77	91.41	92.30		
otal F	luid Added	0		0	0							
						VISCO	OSITY INDEX					
		٧	VEAR LEV	ELS / ADD	DITIVES	VI	Viscosity Index	133	134	134		
		17	7-Sep-23	11-Apr-23	28-Mar-23							
ELEM	ENTAL ANAI	YSIS (PPM) ASTM										
Cu	Copper		19	6	8	INFR/	ARED (UFM) ASTM					
e	Iron		12	5	10	ST	Soot	7	1	2		
Cr	Chromium	ı	0	0	1	OXI	Oxidation	20	18	12		
AI.	Aluminum		2	1	1	SUL	Sulfur Products	23	22	19		
Pb	Lead		0	0	0	NIT	Nitration	0	5	5		
Sn	Tin		0	0	0							
Si	Silicon		4	5	4	WATE	R - HOTPLATE					
'' la	Sodium		3	3	2	W	Water	N	N	N		
			1	1	0	**	Water					
	Potassium		37	40	65							
Ло	Molybdeni	um	1	0	0							
li .	Nickel						DILUTION (SCREE	•				
∖g	Silver		0	0	0	F	Fuel	N	N	N		
Гі	Titanium		0	0	0							
/	Vanadium		0	0	0							
/In	Manganes	e	1	0	0	FUEL	DILUTION (%) AS	ΓM D7593				
d	Cadmium		0	0	0	PFc	Percent Fuel	2.24	<2	<2		
Ca	Calcium		1513	1507	1368	110	. 5.55.11 1 461					
5	Phosphore	ıs	835	886	935							
<u>Z</u> n	Zinc	10	1019	1030	1078				NLINESS			
			443	420	433			17-Sep-23	11-Apr-23	28-Mar-23		
Лg	Magnesiu		0	0	0		OUS DEBRIS			_		
За	Barium		67	80	261	PQI	PQ Index	0	0	0		
,	Danas		h/	XII	761							





Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or component



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



**ENGINE** 

T010-53312-0411

WHELANS GROUP

LOCATION: Bogong
RECEIVED DATE: 08-Nov-23

SHOP JOB NUM: 8W36904

INVESTMENTS PTY LTD

SAMPLE SHIP TIME (days) : 2

EQUIP NUM: D3 SERIAL NUMBER: JJ501379

### CAT D8T



### **Monitor Compartment**

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

my.cat.com

91.41

92.30

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.

SAMPLE INFORMATION										
			1	1						
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	Υ	N	N	Υ						
Filter Change	Υ	N	N	Υ						
Make Up Fluid []			0	43						
Total Fluid Added	0	0	0	0						

				PRE	/IOUS	SAM	PLE				
COPPER R	ESULT	APPE	ARS	SLIGI	HTLY	ELEV	ATED,	SUG	GEST	Cl	JT OPEN
FILTER(S)	AND I	INSPECT	r FC	R D	EBRIS.		CHECK	OPERAT	ΓING	TEN	PERATURE.
MONITOR II	DLE T	ΓIME.	СН	ECK	& E	ENSURE	THIS	COMPA	RTME	NT.	OPERATING
CORRECTLY.	AS	THE	OIL	HAS	NOT	BEEN	CHANGE	ED.	WE	WILL	MONITOR
ACTIVITY O	VER	THE	NEXT	FEW	SAM	MPLES.	ALL	OTHE	ΞR	TEST	RESULTS
APPEAR ACCE	PTABLE.	RESAM	IPLE IN	250 HO	URS TO	MONIT	OR.				

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

87.77

For additional sample history, go to:

VISCOSITY (CENTISTOKES) ASTM D445

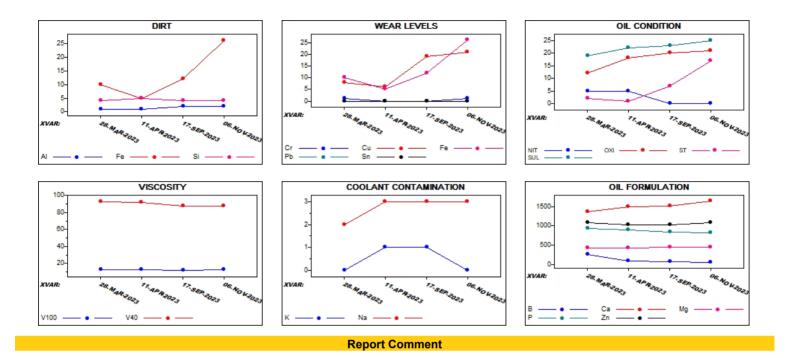
Viscosity at 40 C

PQ Index

	WEAR LEVELS / ADDITIVES									
		06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23					
ELEN	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					
Мо	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					
Са	Calcium	1641	1513	1507	1368					
Р	Phosphorus	821	835	886	935					
Zn	Zinc	1090	1019	1030	1078					
Mg	Magnesium	445	443	420	433					
Ва	Barium	0	0	0	0					
В	Boron	55	67	80	261					

VISCO	OSITY INDEX				
VI	Viscosity Index	135	133	134	134
INFR/	ARED (UFM) ASTM E24	12			
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
WATE	R - HOTPLATE				
W	Water	N	N	N	N
FUEL	DILUTION (SCREEN)				
F	Fuel	N	N	N	N
FUEL	DILUTION (%) ASTM D	7593			
PFc	Percent Fuel	3.15	2.24	<2	<2
		CLEANI	LINESS		
		06-Nov-23	17-Sep-23	11-Apr-23	28-Mar-23
FERR	OUS DEBRIS				







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



### HYDRAULIC SYSTEM

T010-53312-0517

SHOP JOB NUM: 8W36904 SAMPLE SHIP TIME (days) : 2

### WHELANS GROUP INVESTMENTS PTY LTD

LOCATION: Bogong

RECEIVED DATE: 08-Nov-23

#### **EQUIP NUM: D3 SERIAL NUMBER: JJ501379**

### CAT D8T



### **Monitor Compartment**

Interp By: Barry Swindells

Interpreted On: 13-Nov-23

SILICON IS SLIGHTLY HIGH THE OIL VISCOSITY @40C IS HIGHER THAN THE TYPICAL SPECIFICATION FOR THE REPORTED INVESTIGATE AND TRACE AMOUNT OF LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUND. OII 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 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						
		1				
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	Υ	N				
Filter Change	Υ	N				
Total Fluid Added	0	0				

						PRE	EVIC	วบร	S SA	AMPL	_E							
ILICON	IS	SLIC	SHTLY	/ H	HIGH.		WE	٩R	RA	TES	APPE	EAR	то		REMA	AIN	NOF	RMAL.
UGGEST	CL	JT	OPEN	J F	FILTER	R(S)	ANE	)	INSF	ECT	FOR	. [	DEBRI	S.		CHEC	K	FOR
EAKS.	(	CHEC	K	&	ENSU	JRE	TH	IS	CC	MPAR	RTMEN	Т	OPER	RATI	ING	COI	RRE	CTLY.
/E WILL	_ N	ONIT	OR	ACT	IVITY	OV	ER	TH	E I	NEXT	FEV	/ 5	SAMPI	LES.		ALL	0	THER
EST F	RESU	LTS	AF	PEA	.R	ACCE	РТА	BLE	Ξ.	R	RESAM	PLE	11	1	500	HOUI	RS	то
ONITOR.	M	ORE	SAMF	LES	NEEDI	ED TO	DEV	ELO	PAT	REND								

For additional sample history, go to: my.cat.com

#### **CONDITION / CONTAMINATION** 06-Nov-23 28-Mar-23

VISCOSITY (CENTISTOKES) ASTM D445 63.33

INFRARED (UFM) ASTM E2412

64.79 Viscosity at 40 C

	OXI	Oxidation	
MEAD LEVELO / ADDITIVEO			

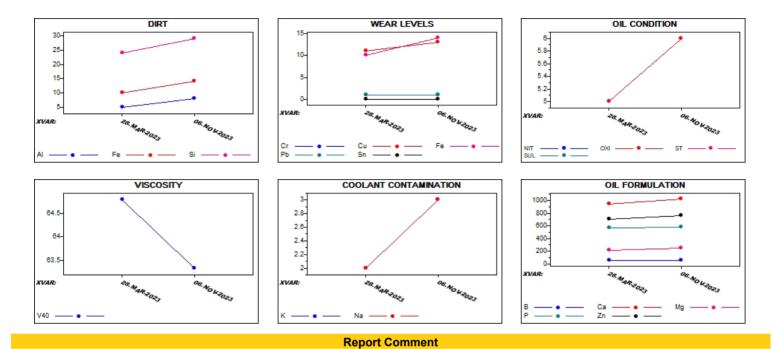
06-Nov-23 28-Mar-23

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						
Мо	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						
Р	Phosphorus	583	572						
Zn	Zinc	764	705						
Mg	Magnesium	253	216						
Ва	Barium	0	0						
В	Boron	58	58						

HOIFLAIL		
/ater	N	N

		CLEAN	LINESS
		06-Nov-23	28-Mar-23
PART	ICLE COUNT - ISO 1117	71:1999 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
	·		
FERR	OUS DEBRIS		
PQI	PQ Index	0	0
VISUA	AL INSPECTION		
DEP	DEP	C1	A1

VISUA	L INSPECTION	ı	
DEP	DEP	C1	A1
DEP2	DEP2	DEB	DEB





PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



### FINAL DRIVE REAR LEFT

T010-53312-0535

SHOP JOB NUM : 8W36904 SAMPLE SHIP TIME (days) : 2

WHELANS GROUP INVESTMENTS PTY LTD

LOCATION: Bogong
RECEIVED DATE: 08-Nov-23

EQUIP NUM: D3

**SERIAL NUMBER: JJ501379** 

### CAT D8T



### **Monitor Compartment**

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 INFORMATI	ON PREVIOUS SAMPLE	
			OIL CONDITION SATISFACTORY, CONTINUE SAMPLING	AT THE
Sampled Date	06-Nov-23	28-Mar-23	RECOMMENDED INTERVAL. MORE SAMPLES NEEDED TO DEVELOP A TREND.	
Sample Id	T010-53312-0535	T010-53090-0323	For additional sample history, go to: my.cat.com	
Lab Date	08-Nov-23	31-Mar-23	CONDITION / CONTAMINATION	
Meter [Hr]	5992.0	5496		
Meter On Fluid	1985.0	1489	06-Nov-23 28-Mar-23	
Fluid Brand	CAT		VISCOSITY (CENTISTOKES) ASTM D445	
Fluid Weight	60		V40 Viscosity at 40 C 153.2 184.8	
Fluid Type	FDAO			
Fluid Change	Υ	N		
Filter Change	NA	N	INFRARED (UFM) ASTM E2412	
Total Fluid Added	0	0	OXI Oxidation 7 6	

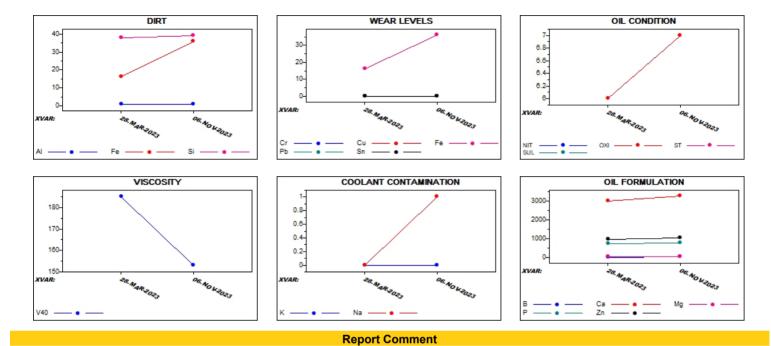
06-Nov-23 28-Mar-23

ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]							
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				
Мо	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				
Са	Calcium	3266	3000				
Р	Phosphorus	785	747				
Zn	Zinc	1056	961				
Mg	Magnesium	36	24				
Ва	Barium	0	0				
В	Boron	20	14				

WATER - HOTPLATE					
W	Water	N	N		

	CLEANLINESS						
		06-Nov-23	28-Mar-23				
PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406							
ISO	ISO Code Rating	20/14	21/17				
6μ	6μ	6245	18540				
14µ	14µ	145	769				
EEDD	OUS DEBRIS						
		6	3				
PQI	PQ Index	0	3				

VISUAL INSPECTION							
DEP	DEP	N	A1				
DEP2	DEP2	N	DEB				





PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### 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** 

#### **SERIAL NUMBER: JJ501379**

#### CAT D8T



#### **Monitor Compartment**

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 COMPARTMENT CONDITION. CHECK IF OIL TYPE AND GRADE PROVIDED ARE CORRECT. MONITOR EVALUATE INSPECT ANY MAGNETIC PLUG(S) FOR FERROUS METAL & CHECK OIL FOR COMPARTMENT FOR RISING OIL LEVEL. 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.

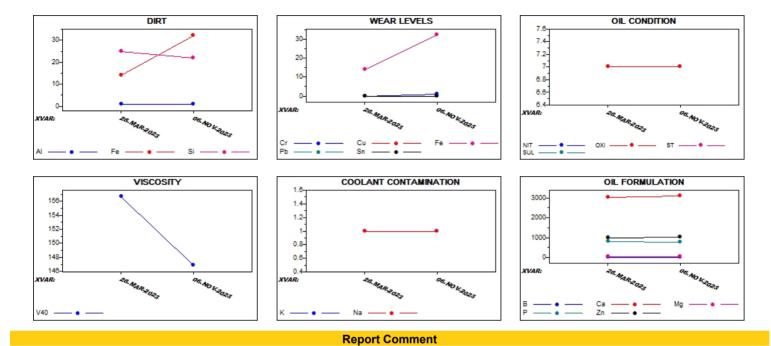
> WATER - HOTPLATE Water

Sampled Date         06-Nov-23         28-Mar-23         RECOMMENDED INTERVAL. MORE S/I           Sample Id         T010-53312-0536         T010-53090-7916         For additional sa           Lob Date         08-Nov-23         31-Mar-23	ACTORY,		
Sampled Date         06-Nov-23         28-Mar-23         RECOMMENDED INTERVAL. MORE S/A           Sample Id         T010-53312-0536         T010-53090-7916         For additional sa           Lab Date         08-Nov-23         31-Mar-23         COI           Meter [Hr]         5992.0         5496         COI           Meter On Fluid         1985.0         1489         VISCOSITY (CENTISTOKES) AST	AMPLES NEEDE	DED TO DEVELOP A	SAMI TREND.
Sample Date         U6-NOV-23         Z8-Nuar-23           Sample Id         T010-53312-0536         T010-53090-7916         For additional sa           Lab Date         08-Nov-23         31-Mar-23         COI           Meter [Hr]         5992.0         5496           Meter On Fluid         1985.0         1489           Fluid Brand         CAT         VISCOSITY (CENTISTOKES) AST			TREND.
Lab Date       08-Nov-23       31-Mar-23         Meter [Hr]       5992.0       5496         Meter On Fluid       1985.0       1489         Fluid Brand       CAT       VISCOSITY (CENTISTOKES) AST	mple history, ຢູ		
Meter [Hr] 5992.0 5496  Meter On Fluid 1985.0 1489  Fluid Brand CAT  VISCOSITY (CENTISTOKES) AST		go to:	my.
Meter [Hr]         5992.0         5496           Meter On Fluid         1985.0         1489           Fluid Brand         CAT         VISCOSITY (CENTISTOKES) AST	IDITION /	CONTAMINAT	CION
Fluid Brand CAT VISCOSITY (CENTISTOKES) AST			ION
Piulo biano	06-Nov-23	28-Mar-23	
Fluid Weight 60 V40 Viscosity at 40 C	M D445		
Fiuld Weight 00	146.9	156.6	
Fluid Type FDAO			
Fluid Change Y N			
Filter Change NA N INFRARED (UFM) ASTM E2412			
Total Fluid Added 0 0 OXI Oxidation	7	7	

OIL	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	ΑТ	THE			
RECOM	MENDED INTERVAL.	MORE SAMPLES NEED	ED TO DEVELOP A	TREND.					
For additional sample history, go to: my.cat.com									
CONDITION / CONTAMINATION									
		06-Nov-23	28-Mar-23						
VISC	OSITY (CENTISTOR	ŒS) ASTM D445							
V40	Viscosity at 40 C	146.9	156.6						

					W	Water
		WEAR LEV	ELS / ADI	DITIVES	vv	vvater
		06-Nov-23	28-Mar-23			
ELEM	ENTAL ANALYSIS (PI	PM) ASTM D5185 [OIL]	ASTM D61	30 [COOLANT]		
Cu	Copper	0	0			
Fe	Iron	32	14		PART	ICLE COL
Cr	Chromium	1	0		ISO	ISO Co
Al	Aluminum	1	1		6μ	6μ
Pb	Lead	0	0		14µ	14µ
Sn	Tin	0	0			
Si	Silicon	22	25		FERR	OUS DEB
Na	Sodium	1	1		PQI	PQ Ind
K	Potassium	1	1			
Мо	Molybdenum	1	0			
Ni	Nickel	0	0			L INSPE
Ag	Silver	0	0		DEP	DEP
Ti	Titanium	0	0		DEP2	DEP2
V	Vanadium	0	0			
Mn	Manganese	1	0			
Cd	Cadmium	0	0			
Са	Calcium	3087	3019			
Р	Phosphorus	759	790			
Zn	Zinc	1016	976			
Mg	Magnesium	31	30			
Ва	Barium	0	0			
В	Boron	12	11			

	CLEANLINESS							
		06-Nov-23	28-Mar-23					
PART	ICLE COUNT - ISO 1117	1:1999 reported per	ISO 4406					
ISO	ISO Code Rating	20/14	21/16					
6μ	6µ	6967	13842					
14µ	14µ	94	556					
	•							
FERR	OUS DEBRIS							
PQI	PQ Index	6	2					
VISUA	AL INSPECTION							
DEP	DEP	N	N					





PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



### TRANSMISSION POWER

SHIFT

#### T010-53312-0523

SHOP JOB NUM: 8W36904 SAMPLE SHIP TIME (days): 2

# WHELANS GROUP INVESTMENTS PTY LTD

LOCATION: Bogong

Sampled Date

Sample Id

Lab Date

Meter [Hr]

Fluid Brand

Fluid Weight

Filter Change

Total Fluid Added

Fluid Type Fluid Change

Meter On Fluid

RECEIVED DATE: 08-Nov-23

#### EQUIP NUM: D3

SERIAL NUMBER: JJ501379





#### No Action Required

Interp By: Barry Swindells
Interpreted On: 13-Nov-23

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

MPLE INFORMATION	
1	
28-Mar-23	
T010-53090-0116	

OIL RECOM VISC V40

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

For additional sample history, go to: my.cat.com

#### CONDITION / CONTAMINATION 06-Nov-23 28-Mar-23

VISCOSITY (CENTISTOKES) ASTM D445

V/40 Viscosity at 40 C 82.71 83.34

V40 Viscosity at 40 C 82.71 83.34

INFRARED (UFM) ASTM E2412
OXI Oxidation 6 6

#### WEAR LEVELS / ADDITIVES

0

31-Mar-23

5496

06-Nov-23 28-Mar-23

SAMP

06-Nov-23

T010-53312-0523

08-Nov-23

5992.0

1003.0

CAT

30

TDTO

Υ

0

ELEME	ENTAL ANALYSIS (PPM) AS	FM D5185 [O	IL] / ASTM D6130 [0	COOLANT
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	
Мо	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	
Р	Phosphorus	842	853	
Zn	Zinc	1100	1005	
Mg	Magnesium	63	59	
Ва	Barium	0	0	
В	Boron	35	35	

WAT	ER -	HOT	PLA	ΤE

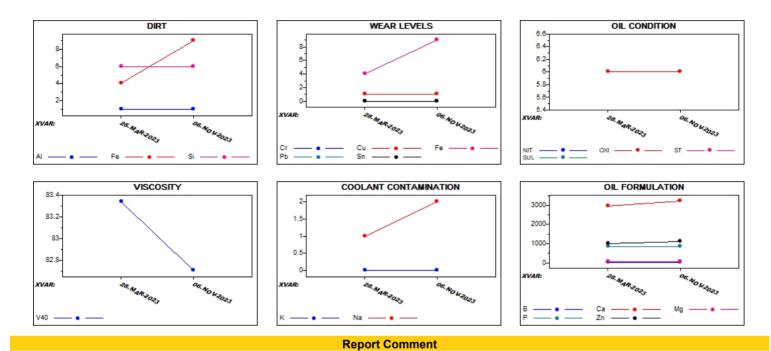
W

Water

N N

		CLEAN	LINESS	
		06-Nov-23	28-Mar-23	
PARTI	CLE COUNT - ISO 1117	1:1999 reported per	ISO 4406	
ISO	ISO Code Rating	19/14/10	18/17/16	
4μ	4μ	2542	2225	
6μ	6μ	109	730	
14µ	14µ	10	377	
FERR	OUS DEBRIS			
PQI	PQ Index	0	0	
VISUA	L INSPECTION			
DEP	DEP	N	N	
DEP2	DEP2	N	N	







## WILLIAM ADAMS PTY. LTD - William Adams Pty. Ltd. 17-55 Nantilla Road

Clayton North, Vic 3168 Australia

PHONE: 03 9566 0666



Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

#### RADIATOR

#### T010-53312-2043

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



#### **Action Required**

**SERIAL NUMBER: JJ501379** 

Interp By: Tom Cokalis
Interpreted On: 13-Nov-23

MODERATE AMOUNT OF BLACK & BROWN

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.

WEAR LEVELS APPEAR HIGH,

	S	AMPLE INFORMATION	
	$\triangle$		
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	

SOLID	NON-	-MAGN	IETIC	PAR	TICLES	PR	ESENT.	DI	EPOSI	TS	CAN	AC	CELEF	RATE
WEAR	OF	COC	DLING	SYS	TEM	COM	PONENT	rs	AND	M	٩Y	REDU	CE	THE
EFFICIENC	Y	OF	HEAT	TRA	NSFER	BY	BLOC	KING	PA	SSAG	ES	AND	COA	TING
SURFACES	3.	СН	ECK	FOR	LOCA	LIZED	OVER	HEATI	ING	OR	RES	TRICTE	ED F	LOW
IN THE	COC	DLING	SYST	EM.	CHE	CK RA	DIATOR	FIN	NS A	ARE	FREE	OF	DUST	- &
COOLANT	LE	VELS	INC	LUDING	OV	ERFLOV	1AT V	٧K	ARE	FIL	LED	TO	COR	RECT
LEVELS.		CHEC	CK :	SERVIC	E H	ISTOR	Y FO	R /	ANY	SCH	HEDUL	ED	INHIB	TOR
ADDITION	Α	ND	COOL	ANT	LIFE	TO	DETER	MINE	WI	HEN	REF	LACE	MENT	IS
NECESSA	RY.		AFTE	R SI	ERVICI	NG	RESAM	PLE	AT	N	EXT	MAII	NTENA	NCE
INTERVAL	TO CH	HECK C	OOLAN	IT CON	DITION.									

PREVIOUS SAMPLE

For additional sample history, go to: my.cat.com

<b>CORROSION LEVELS/</b>	CHEMISTRY
--------------------------	-----------

06-Nov-23 28-Mar-23

ELEME	ELEMENTAL ANALYSIS (PPM) ASTM DS183 [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						
Мо	Molybdenum	496	423						

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

ADDIT	IONAL ANALYTE	S	
MoO4	Molybdate	826	706
воз	Borate	1	2
SiO3	Silicate	47	62

	ADDITIONAL CHARACTERISTICS						
		06-Nov-23	28-Mar-23				
ION C	HROMATOGRA	PHY (PPM) ASTM D4327					
CL	Chloride	73	110				
SO4	Sulfate	64	109				

ADDI	TIONAL ANALYTES		
TH	Total Hardness	27	33

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

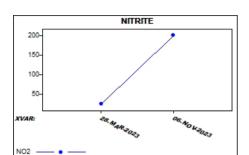
рн			
рН	pH	7.3	7.2

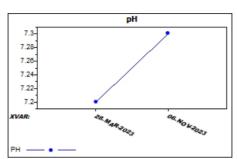
CONDU	ICTIVITY (µS/cm)			
CON	Conductivity	3553	4503	

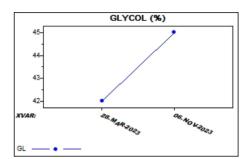
	PHYSICAL CHARACTERISTICS					
06-Nov-23 28-Mar-23						
PHYSICALS						
Color	Color	red	orange			
Арр	Appearance	clear	clear			
Odor	Odor	norm	norm			
Oil	Oil	none	none			
Foam	Foam	norm	light			
PAmt	Precip Amount	trace	moderate			
PApp	Precip Appearanc	granular	fine			
PCol	Precip Color	blk sol	brn/blk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

CAT D8T









#### **Report Comment**



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### RADIATOR

**EQUIP NUM: D3** 

**SERIAL NUMBER: JJ501379** 

#### 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

#### CAT D8T **Monitor Compartment** Ţ

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

IRON: ALUMINIUM; COPPER; ZINC; LEVELS TEMPERATURE. COOLANT CONDITION. AFTER SERVICING CONDITION.

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

SAMPLE INFORMATION					
		$\triangle$			
Sampled 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 LEV	VELS ARE	HIGH.	IRON	AND Z	ZINC LE	VELS	ARE	SLIGHTLY
ELEVATED.	ALTHOUGH	LEVELS	HAVE	DECREASE	ED FROI	M PRE	VIOUS	SAMPLE.
ALL OTHER	COMPARTM	ENT INDI	CATORS	APPEAR	ACCE	PTABLE.	CHEC	CK FOR
ANY SYSTE	EM WARNIN	IGS OR	OTHE	R INDI	CATORS	OF	OVER	HEATING.
RECOMMEND	DRAINING	AND RE	PLENISH	ING WIT	Н А	COMPA	ΓIBLE	QUALITY
COOLANT.	WE WIL	L CONTINU	JE TO	MONITOR	COOLAN	T CONE	DITION.	AFTER
SERVICING	RESAMPLE	AT NE	XT M	AINTENAN	CE INT	TERVAL	то	CHECK
COOLANT CONE	DITION.							

For additional sample history, go to:

28-Jan-24

-31

106

7.7

S.O.S WEB ADDITIONAL CHARACTERISTICS

28-Mar-23

-28

105

7.2

	CORROSION LEVELS/ CHEMISTRY							
	28-Jan-24 06-Nov-23 28-Mar-23							
ELEM	ENTAL ANALYSIS (F	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				
Мо	Molybdenum	502	496	423				

ION	ION CHROMATOGRAPHY (PPM) ASTM D4327							
CL	Chloride	70	73	110				
SO4	Sulfate	53	64	109				
ADDI	TIONAL ANALYTES							
TH	Total Hardness	23	27	33				
REFRACTIVE INDEX								
GL	Glycol (%)	45	45	42				

06-Nov-23

-31

106

7.3

рН
pН
COND
CON

FP

BP

Freeze Point (°C)

Boil Point (°C)

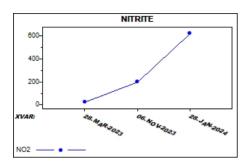
CONE	OUCTIVITY (µS/cm)				
CON	Conductivity	3467	3553	4503	

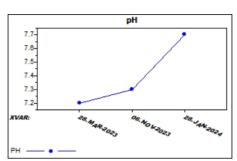
NO2	Nitrite	619	200	24	
NO3	Nitrate	302	157	100	
GLO	Glycolate	603	1324	1282	
ADDITI	ONAL ANALYTES				
MoO4	Molybdate	837	826	706	
воз	Borate	3	1	2	
SiO3	Silicate	46	47	62	

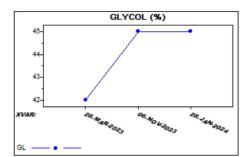
ION CHROMATOGRAPHY (PPM) ASTM D4327

	PHYSICAL CHARACTERISTICS				
		28-Jan-24	06-Nov-23	28-Mar-23	
PHYSICALS					
Color	Color	red	red	orange	
Арр	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 Appearanc	granular	granular	fine	
PCol	Precip Color	blk sol	blk sol	brn/blk sol	
PPron	Precip Property	non-mag	non-mag	non-mag	









#### **Report Comment**



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

OIL CONDITION

PQI

PQ Index

RECOMMENDED INTERVAL



ENGINE

EQUIP NUM: D3 SERIAL NUMBER: JJ501379

#### T010-54031-0208

LABEL#: 1

 $\label{eq:Shop_JOB_NUM:8W37277} SAMPLE\ SHIP\ TIME\ (days):3$ 

WHELANS GROUP INVESTMENTS PTY LTD

LOCATION: BOGONG
RECEIVED DATE: 31-Jan-24

CAT D8T

No Action Required

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

SAMPLING

ΑТ

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

		SAMPLE INFORMA	TION	
			1	
Sampled Date	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	Υ	N	Υ	N
Filter Change	Υ	N	Υ	N
Make Up Fluid [L]		0.0		
Total Fluid Added	0.0	0.0	0	0

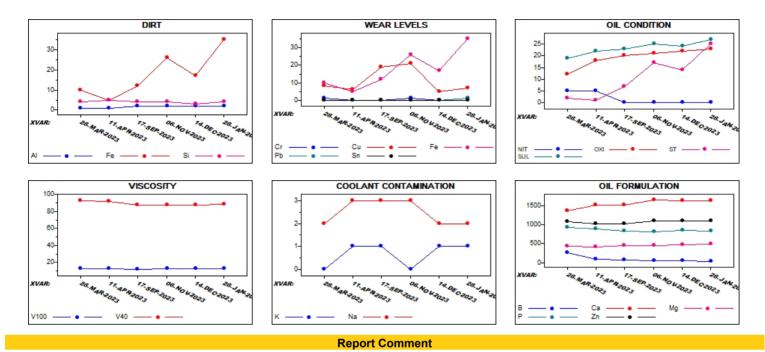
i Otal i	idid Added	0.0	0.0	U		U
		WEAR	LEVELS / ADD	DITIVES		
		28-Jan-2	4 14-Dec-23	06-Nov-23	17-Sep-23	
ELEN	IENTAL ANALYSIS	(PPM) ASTM D5185	[OIL] / ASTM D61:	30 [COOLANT]		
Cu	Copper	7	5	21	19	
Fe	Iron	35	17	26	12	
Cr	Chromium	1	0	1	0	
Al	Aluminum	2	2	2	2	
Pb	Lead	1	0	0	0	
Sn	Tin	0	0	0	0	
Si	Silicon	4	3	4	4	
Na	Sodium	2	2	3	3	
K	Potassium	1	1	0	1	
Мо	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	
Са	Calcium	1639	1623	1641	1513	
Р	Phosphorus	825	856	821	835	
Zn	Zinc	1089	1089	1090	1019	
Mg	Magnesium	482	478	445	443	
Ва	Barium	0	0	0	0	
В	Boron	40	48	55	67	

	For additional	sample history, go	to:	S.O.S WEB	
	С	ONDITION / C	ONTAMINAT	ION	
		28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
VISCO	OSITY (CENTISTOKES) A				
V100	Viscosity at 100 C	12.50	12.37	12.31	12.22
VISCO	OSITY (CENTISTOKES) A	STM D445			
V40	Viscosity at 40 C	88.46	87.26	87.69	87.77
VISCO	OSITY INDEX				
VI	Viscosity Index	137	138	135	133
INFRA	RED (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
WATE	R - HOTPLATE				
W	Water	N	N	N	N
FUEL	DILUTION (SCREEN)				
F	Fuel	N	N	N	N
FUEL	DILUTION (%) ASTM D75	i93			
PFc	Percent Fuel	3.35	3.01	3.15	2.24
		CLEAN	LINESS		
		28-Jan-24	14-Dec-23	06-Nov-23	17-Sep-23
FERR	OUS DEBRIS				

PREVIOUS SAMPLE

SATISFACTORY, CONTINUE







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### HYDRAULIC SYSTEM

SHOP JOB NUM: 8W37277

SAMPLE SHIP TIME (days): 3 WHELANS GROUP INVESTMENTS PTY LTD LOCATION: BOGONG RECEIVED DATE: 31-Jan-24

T010-54031-0114

LABEL#: 3

**EQUIP NUM: D3** 

CAT D8T



#### No Action Required

**SERIAL NUMBER: JJ501379** 

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

	SAMPLE INFORMATION				
		1	1		
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	Υ	N		
Filter Change	N	Υ	N		
Total Fluid Added	0	0	0		

I REVIOUS SAWI EE	
SILICON IS SLIGHTLY HIGH. THE OIL VISCOSITY @40C IS HIGHER THAN T	ΉE
TYPICAL SPECIFICATION FOR THE REPORTED OIL. TRACE AMOUNT	OF
LARGE VISIBLE NON-MAGNETIC FOREIGN DEBRIS PARTICLES FOUN	ID.
INVESTIGATE AND EVALUATE COMPARTMENT CONDITION. SUGGEST C	UT
OPEN FILTER(S) AND INSPECT FOR DEBRIS. MONITOR COMPARTMENT FOR	OR
RISING OIL LEVEL. CHECK FOR LEAKS. CHECK & ENSURE TH	HIS
COMPARTMENT OPERATING CORRECTLY. RECOMMEND SCHEDULE UN	VIT
FOR INSPECTION ASAP. AFTER INSPECTION AND SERVICE, RESAMPLE	АТ
HALF THE RECOMMENDED INTERVAL TO RE-EVALUATE CONDITION. MO	RE
SAMPLES NEEDED TO DEVELOP A TREND.	
For additional sample history, go to: S.O.S WEB	

PREVIOUS SAMPLE

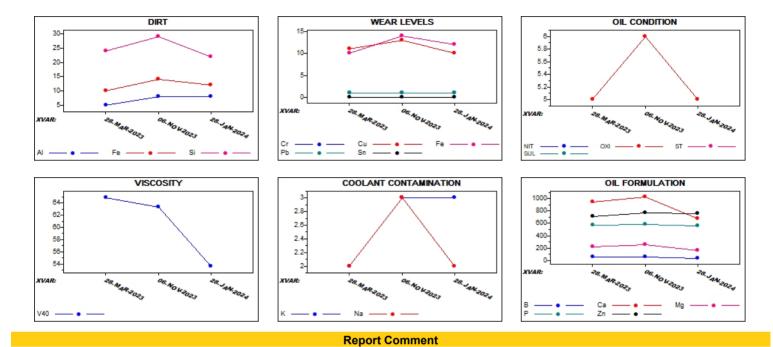
	(	CONDITION / C	ONTAMINAT	ON	
		28-Jan-24	06-Nov-23	28-Mar-23	
VISC	OSITY (CENTISTOKES)	ASTM D445			
V40	Viscosity at 40 C	53.68	63.33	64.79	

INFRARED (UFM) ASTM E2412

OXI Oxidation

		WEAR LE	VELS / ADDI	ΓIVES	
		28-Jan-24	06-Nov-23	28-Mar-23	
ELEM	ENTAL ANALYSIS (PPI	M) 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	
Мо	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	
Са	Calcium	678	1020	941	
Р	Phosphorus	557	583	572	
Zn	Zinc	755	764	705	
Mg	Magnesium	157	253	216	
Ва	Barium	0	0	0	
В	Boron	37	58	58	

WATE	R - HOTPLATE			
W	Water	N	N	N
		CLEAN	LINESS	
		28-Jan-24	06-Nov-23	28-Mar-23
PART	ICLE COUNT - ISO 1117	1:1999 reported per	r 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
•	•			
FERR	OUS DEBRIS			
PQI	PQ Index	0	0	0
VISUA	AL INSPECTION			
DEP	DEP	N	C1	A1
DEP2	DEP2	N	DEB	DEB





PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### FINAL DRIVE REAR LEFT

# 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

#### **EQUIP NUM: D3**

### JM: D3 SERIAL NUMBER: JJ501379

#### CAT D8T



#### No Action Required

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

	;	SAMPLE INFORMA	TION
		2	
Sampled Date	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	Υ	N
Filter Change	U	NA	N
Total Fluid Added	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
. 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 additiona	l sample history, go	to:	S.O.S WEB		
	C	CONDITION / C	ON			
		28-Jan-24	06-Nov-23	28-Mar-23		
VISCO	VISCOSITY (CENTISTOKES) ASTM D445					
V40	Viscosity at 40 C	268.7	153.2	184.8		

INFRARED (UFM) ASTM E2412

VISUAL INSPECTION

DEP DEP
DEP2 DEP2

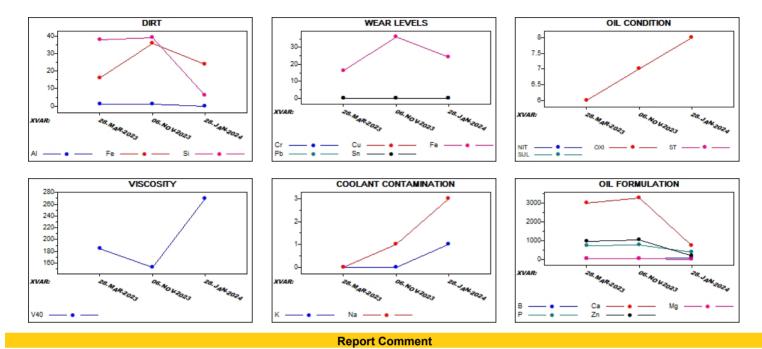
	WEAR LEVELS / ADDITIVES							
		28-Jan-24	06-Nov-23	28-Mar-23				
ELEM	ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]							
Cu	Copper	0	0	0				
Fe	Iron	24	36	16				
Cr	Chromium	0	0	0				
Al	Aluminum	0	1	1				
Pb	Lead	0	0	0				
Sn	Tin	0	0	0				
Si	Silicon	6	39	38				
Na	Sodium	3	1	0				
K	Potassium	1	0	0				
Мо	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				
Са	Calcium	732	3266	3000				
P	Phosphorus	363	785	747				
Zn	Zinc	205	1056	961				
Mg	Magnesium	9	36	24				
Ва	Barium	0	0	0				
В	Boron	71	20	14				

OXI	Oxidation							
WATE	R - HOTPLATE							
W	Water	N	N	N				
	CLEANLINESS							
		28-Jan-24	06-Nov-23	28-Mar-23				
PART	ICLE COUNT - ISO 1117	1:1999 reported per	ISO 4406					
ISO	ISO Code Rating	19/16	20/14	21/17				
6μ	6µ	4037	6245	18540				
14µ	14µ	548	145	769				
	r							
FERROUS DEBRIS								
PQI	PQ Index	1	6	3				

Α1

DEB







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



FINAL DRIVE REAR

RIGHT

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 **EQUIP NUM: D3** 

CAT D8T



No Action Required

SERIAL NUMBER: JJ501379

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

		SAMPLE INFORMA	TION
		1	1
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	Υ	N
Filter Change	N	NA	N
Total Fluid Addad	0	0	0

		1	
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	Υ	N
Filter Change	N	NA	N
Total Fluid Added	0	0	0

		WEAR LE	VELS / ADDI	TIVES
		28-Jan-24	06-Nov-23	28-Mar-23
ELEM	ENTAL ANALYSIS (F	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
Мо	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
Са	Calcium	440	3087	3019
Р	Phosphorus	263	759	790
Zn	Zinc	92	1016	976
Mg	Magnesium	6	31	30
Ва	Barium	0	0	0
В	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:	5.U.5 WEB	
CONDITION / CONTAMINATION	ON!	

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

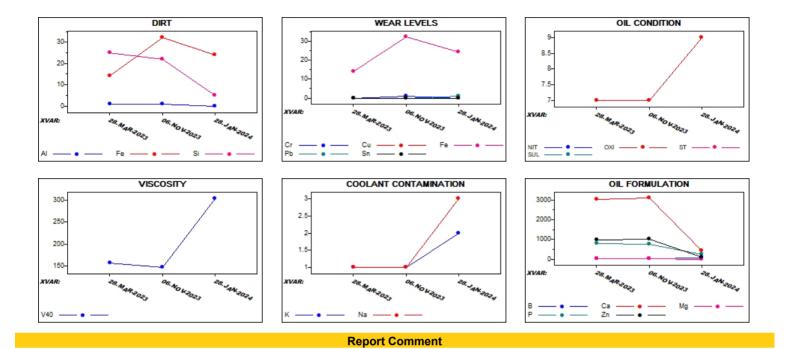
INFRARED (UFM) ASTM E2412

**FERROUS DEBRIS** PQ Index

OXI	Oxidation	9	7	7			
WATER	R - HOTPLATE						
W	Water	N	N	N			
		CLEANLI	NESS				
		28-Jan-24	06-Nov-23	28-Mar-23			
PARTIC	PARTICLE COUNT - ISO 11171:1999 reported per ISO 4406						
ISO	ISO Code Rating	19/17	20/14	21/16			
6μ	6µ	3304	6967	13842			
- 1	- F						

N			
IN	N	N	
N	N	N	
	N	N N	N N N





Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or component



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



## 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

SERIAL NUMBER: JJ501379

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

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

SAMPLE INFORMATION							
Sampled Date	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	Υ	N				
Filter Change	Υ	Υ	Υ				
Total Fluid Added	0	0	0				

Sampled Date	28-Jan-24	06-Nov-23	28-Mar-23	RECOM	MENDED INTERVAL. MORE	SAMPLES NEEDED	TO DEVELOP A T	REND.	
Sample Id	T010-54031-0316	T010-53312-0523	T010-53090-0116		For additional s	ample history, go	to:	S.O.S WEB	
Lab Date	31-Jan-24	08-Nov-23	31-Mar-23		CC	NDITION / C	ONTAMINATI	ON	
Meter [Hr]	6516.0	5992.0	5496			28-Jan-24	06-Nov-23	28-Mar-23	
Comp Meter [Hr]	6515.0						00-INOV-25	20-IVIdI -23	
Meter On Fluid	524.0	1003.0		VISCO	SITY (CENTISTOKES) AS				
Fluid Brand	CAT	CAT		V40	Viscosity at 40 C	89.94	82.71	83.34	
Fluid Weight	30	30							
Fluid Type	TDTO	TDTO							
Fluid Change	N	Υ	N	INFRA	RED (UFM) ASTM E2412				
Filter Change	Υ	Υ	Υ	OXI	Oxidation	5	6	6	
otal Fluid Added	0	0	0	٥,,,	- Audulen				

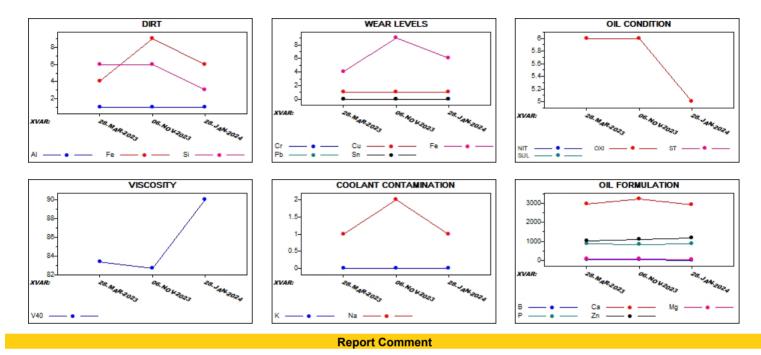
WATER - HOTPLATE

		WEAR LE	VELS / ADDI	TIVES	
		28-Jan-24	06-Nov-23	28-Mar-23	
ELEM	IENTAL ANALYSIS (PPI	M) 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	
Мо	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	
Са	Calcium	2924	3203	2947	
Р	Phosphorus	868	842	853	
Zn	Zinc	1153	1100	1005	
Mg	Magnesium	24	63	59	
Ва	Barium	0	0	0	
В	Boron	11	35	35	

VV	vvater	IN	IN	IN					
CLEANLINESS									
		28-Jan-24	06-Nov-23	28-Mar-23					
PARTI	CLE COUNT - ISO 1117	71:1999 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					
FERR	OUS DEBRIS								
PQI	PQ Index	0	0	0					
VISUA	L INSPECTION								
DEP	DEP	N	N	N					
DEP2	DEP2	N	N	N					

PREVIOUS SAMPLE OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



**ENGINE** 

T010-54066-0224

WHELANS GROUP INVESTMENTS PTY LTD LOCATION: BOGONG RECEIVED DATE: 06-Mar-24

SHOP JOB NUM : WGI2403

SAMPLE SHIP TIME (days): 5

**EQUIP NUM: D3 SERIAL NUMBER: JJ501379** 



#### No Action Required

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

SAMPLING

S.O.S WEB

ΑТ

THE

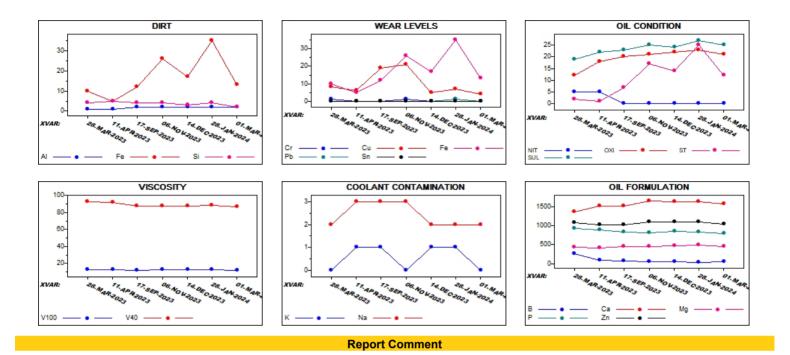
CONDITION / CONTAMINATION

OIL CONDITION SATISFACTORY, CONTINUE SAMPLING AT THE RECOMMENDED INTERVAL.

		SAMPLE INFORMA	TION				PREVIOUS	S SAMPLE
	1	-		1	OIL	CONDITION	SATISFACTORY,	CONTINUE
Sampled Date	01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23	RECOM	MENDED INTERVAL.		
Sample Id	T010-54066-0224	T010-54031-0208	T010-53352-041	0 T010-53312-0411		For add	litional sample history, g	jo to:
Lab Date	06-Mar-24	31-Jan-24	18-Dec-23	08-Nov-23			CONDITION / (	CONTAMINATION
Meter [Hr]	6789	6516.0	6278.0	5992.0				
Comp Meter [Hr]	6789	6515.0					01-Mar-24	28-Jan-24
Meter On Fluid	273.0	524.0	286.0	496.0	VISC	OSITY (CENTISTOR	•	
Fluid Brand	CAT	CAT	CAT	CAT	V100	Viscosity at 100 0	12.22	12.50
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	Υ	N	Υ	VISC	OSITY (CENTISTOR	(FS) ASTM D445	
Filter Change	N	Υ	N	Υ	V40	Viscosity at 40 C		88.46
Make Up Fluid [L]			0.0		V40	Viscosity at 40 C		
Total Fluid Added	0	0.0	0.0	0				
					VISC	OSITY INDEX		
	w	EAR LEVELS / ADD	DITIVES		VI	Viscosity Index	136	137
	01-	Mar-24 28-Jan-24	14-Dec-23	06-Nov-23				
ELEMENTAL ANA	LYSIS (PPM) ASTM [	D5185 [OIL] / ASTM D613	30 [COOLANT]					
Cu Copper		4 7	5	21	INFR	ARED (UFM) ASTM	E2412	
		12 25	17	26	СТ	Coot	12	25

Meter	[Hr]	6789	6	516.0	6278.0	5992.0			01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
Comp	Meter [Hr]	6789		515.0			\/IOO	COLTA (OFNITIOTOL/FO)		20-3411-24	14-Dec-23	00-1107-23
Meter	On Fluid	273.0		524.0	286.0	496.0		OSITY (CENTISTOKES)	12.22	12.50	12.37	12.31
Fluid E		CAT		CAT	CAT	CAT	V100	Viscosity at 100 C	12.22	12.50	12.57	12.51
Fluid V	•	15W-40		5W-40	15W-40	15W-40						
Fluid T		DEO ULS	DEO-	-ULS(CJ-4)	DEO-ULS(CJ-4)	DEO-ULS(CJ-	4)					
	Change	N		Υ	N	Y	VISC	OSITY (CENTISTOKES)	ASTM D445			
	Change	N		Υ	N 0.0	Y	V40	Viscosity at 40 C	86.37	88.46	87.26	87.69
	Up Fluid [L] luid Added	0		0.0	0.0	0						
Total I	idid Added	U		0.0	0.0	0						
							VISC	OSITY INDEX				
		1	WEAR LE	VELS / ADDI	TIVES		VI	Viscosity Index	136	137	138	135
		0	1-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23						
ELEMI	ENTAL ANALYS	SIS (PPM) ASTM	D5185 [OIL	] / ASTM D6130	[COOLANT]							
Cu	Copper		4	7	5	21	INFR	ARED (UFM) ASTM E24°				
Fe	Iron		13	35	17	26	ST	Soot	12	25	14	17
Cr	Chromium		0	1	0	1	OXI	Oxidation	21	23	22	21
Al	Aluminum		2	2	2	2	SUL	Sulfur Products	25	27	24	25
Pb	Lead		0	1	0	0	NIT	Nitration	0	0	0	0
Sn	Tin		0	0	0	0						
Si	Silicon		2	4	3	4	WATE	ER - HOTPLATE				
Na	Sodium		2	2	2	3	W	Water	N	N	N	N
K	Potassium		0	1	1	0						
Мо	Molybdenum		37	39	40	39						
Ni	Nickel		0	0	0	0	FUEL	DILUTION (SCREEN)				
Ag	Silver		0	0	0	0	F	Fuel	N	N	N	N
Ti	Titanium		0	0	0	0						
V	Vanadium		0	0	0	0						
Mn	Manganese		0	1	0	1	FUFI	DILUTION (%) ASTM D	7593			
Cd	Cadmium		0	0	0	0	PFc	Percent Fuel	2.34	3.35	3.01	3.15
Ca	Calcium		1565	1639	1623	1641						
Р	Phosphorus		794	825	856	821			CLEAN	LINESS		
Zn	Zinc		1037	1089	1089	1090			01-Mar-24	28-Jan-24	14-Dec-23	06-Nov-23
Mg	Magnesium		459	482	478	445	FFDE	OUS DEBRIS	01-iviai-24	20-3411-24	14-060-23	00-1107-23
Ва	Barium		0	0	0	0	PQI	PQ Index	0	0	0	0
В	Boron		44	40	48	55	- 1 01	. William				







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### RADIATOR

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

#### **EQUIP NUM: D3**

CAT D8T



#### **Action Required**

SERIAL NUMBER: JJ501379

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

WAS A SAMPLING GUN USED FOR THE OIL

LIGHT QUANTITY OF OIL IDENTIFIED IN SAMPLE, WEAR LEVELS REMAIN HIGH, 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

CON Conductivity

	SAMPLE INFORMATION								
	$\triangle$	2	$\triangle$						
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					

		CORROSION I	LEVELS/ CH	HEMISTRY	
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23
ELEME	ENTAL 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
Мо	Molybdenum	483	502	496	423
ION C	HROMATOGRAPH	IY (PPM) ASTM D4327			
NO2	Nitrite	638	619	200	24
NO3	Nitrate	227	302	157	100
GLO	Glycolate	748	603	1324	1282
ADDIT	IONAL ANALYTES	3			
MoO4	Molybdate	805	837	826	706
ВО3	Borate	3	3	1	2
SiO3	Silicate	41	46	47	62

				PREV	10088	AMPLI	=			
IRON;	ALUMINIU	M; (	COPPER;	ZINC;	LEVELS	ARE	ELEVATE	D BUT	HAVE	BEGAN
то	SUBSIDE	. c	HECK	OPERA	ATING	TEMP	ERATURE	≣.	ALL	OTHER
COMPA	RTMENT	INDIC	ATORS	APPEAR	ACCEP*	TABLE.	WE	WILL	CONTINU	UE TO
MONIT	OR COOL	LANT	CONDI	TION.	AFTER	SER	VICING	RESAMPI	.E AT	NEXT
MAINTE	ENANCE INT	ERVAL	TO CHEC	K COOLAN	T CONDITION	ON.				

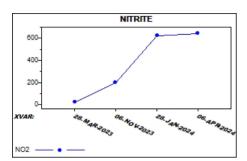
For additional sample history, go to: S.O.S WEB

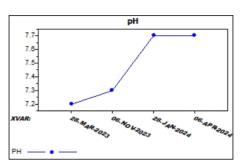
	ADDITIONAL CHARACTERISTICS									
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23					
ION C	ION CHROMATOGRAPHY (PPM) ASTM D4327									
CL	Chloride	60	70	73	110					
SO4	Sulfate	49	53	64	109					
ADDITIONAL ANALYTES										
TH	Total Hardness	21	23	27	33					

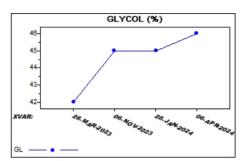
REFF	REFRACTIVE INDEX									
GL	Glycol (%)	46	45	45	42					
FP	Freeze Point (°C)	-32	-31	-31	-28					
BP	Boil Point (°C)	106	106	106	105					
рН										
рН	pН	7.7	7.7	7.3	7.2					
CON	CONDITICITY (uS/cm)									

	PHYSICAL CHARACTERISTICS								
06-Apr-24 28-Jan-24 06-Nov-23 28-Mar-23									
PHYSICALS									
Color	Color	red	red	red	orange				
Арр	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 Appearanc	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**



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

CONDITION



**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

PREVIOUS SAMPLE

CONDITION / CONTAMINATION

01-Mar-24

SATISFACTORY, CONTINUE

06-Apr-24

For additional sample history, go to:

Interpreted On: 11-Apr-24

SAMPLING

28-Jan-24

S.O.S WEB

ΑТ

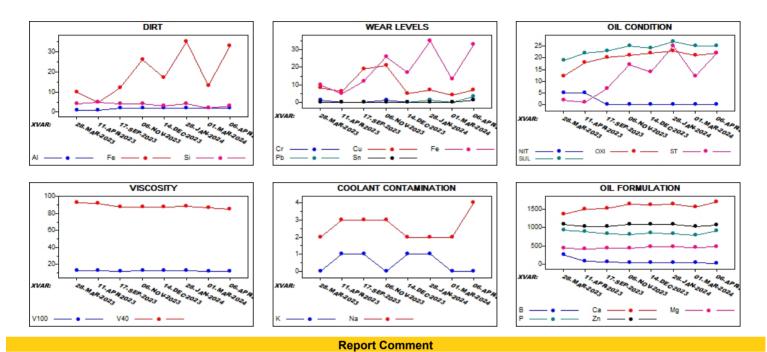
14-Dec-23

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	Υ	N	Υ	N				
Filter Change	Υ	N	Υ	N				
Make Up Fluid [L]				0.0				
Total Fluid Added	0	0	0.0	0.0				

	O- Florid	542.0		273.0	524.0	286.0	VISC	OSITY (CENTISTOKES) AS	STM D445			
	On Fluid Brand	CAT		CAT	CAT	CAT	V100	•	12.21	12.22	12.50	12.37
	Brand Weight	15W-40	1	15W-40	15W-40	15W-40						
Fluid		DEO ULS		DEO ULS	DEO-ULS(CJ-4)	DEO-ULS(CJ	4)					
	Change	γ	-	N	Υ	N		COLTY (OFNITIOTOL/EO) A	OTM D445			
	Change	Y		N	Y	N		OSITY (CENTISTOKES) A	85.17	86.37	88.46	87.26
	Up Fluid [L]					0.0	V40	Viscosity at 40 C	65.17	60.57	00.40	67.20
Total F	Fluid Added	0		0	0.0	0.0						
								OSITY INDEX				
			WEAR LE	EVELS / ADDI	TIVES		VI	Viscosity Index	138	136	137	138
			06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23						
ELEM	IENTAL ANALY	SIS (PPM) AS	STM D5185 [OII	L] / ASTM D6130	[COOLANT]							
Cu	Copper		7	4	7	5	INFR	ARED (UFM) ASTM E2412				
Fe	Iron		33	13	35	17	ST	Soot	22	12	25	14
Cr	Chromium		1	0	1	0	OXI	Oxidation	22	21	23	22
Al	Aluminum		2	2	2	2	SUL	Sulfur Products	25	25	27	24
Pb	Lead		3	0	1	0	NIT	Nitration	0	0	0	0
Sn	Tin		1	0	0	0						
Si	Silicon		3	2	4	3	WATI	ER - HOTPLATE				
Na	Sodium		4	2	2	2	W	Water	N	N	N	N
K	Potassium		0	0	1	1						
Мо	Molybdenum	1	37	37	39	40						
Ni	Nickel		0	0	0	0	FLIEL	DILUTION (SCREEN)				
Ag	Silver		0	0	0	0	F	Fuel	N	N	N	N
Ti	Titanium		0	0	0	0	'	1 461				
V	Vanadium		0	0	0	0						
Mn	Manganese		0	0	1	0	C) IC	DULLITION (9/) ACTA DZE	02			
Cd	Cadmium		0	0	0	0		DILUTION (%) ASTM D75	3.55	2.34	3.35	3.01
Ca	Calcium		1686	1565	1639	1623	PFc	Percent Fuel	3.33	2.34	3.33	3.01
Ca P	Phosphorus		918	794	825	856						
P Zn	Zinc		1068	1037	1089	1089				LINESS		
			485	459	482	478			06-Apr-24	01-Mar-24	28-Jan-24	14-Dec-23
Mg	Magnesium		0	0	0	0		ROUS DEBRIS				
Ва	Barium		36	44	40	48	PQI	PQ Index	0	0	0	0
В	Boron		30	44	40	48						







PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au



#### HYDRAULIC SYSTEM

#### EQUIP NUM: D3

#### SERIAL NUMBER: JJ501379

#### 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

# 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.

WATER - HOTPLATE

Water

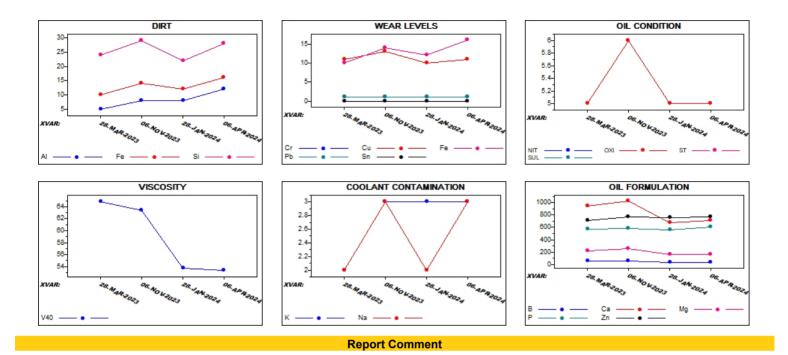
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SAMPLE INFORMATION							
		-	2	1			
Sampled Date	06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23			
Sample Id	T010-54101-0723	T010-54031-0114	T010-53312-0517	T010-53090-0304			
Lab Date	10-Apr-24	31-Jan-24	08-Nov-23	31-Mar-23			
Meter [Hr]	7058.0	6516.0	5992.0	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	Υ	N			
Filter Change	Υ	N	Υ	N			
Total Fluid Added	0	0	0	0			

		PREVIOL	JS SAMPLE			
OIL RECOM	CONDITION  MENDED INTERVAL		CONTINUE	SAMPLING	ΑТ	THE
	For ac	Iditional sample history,	go to:	S.O.S WEB		
		CONDITION /	CONTAMINA	TION		
		06-Apr-24	28-Jan-24	06-Nov-23	28-Ma	ar-23
VISC	OSITY (CENTISTO	KES) ASTM D445				
V40	Viscosity at 40	C 53.39	53.68	63.33	64.7	'9
INFR	ARED (UFM) ASTI	/ E2412				
OXI	Oxidation	5	5	6	5	

	WEAR LEVELS / ADDITIVES								
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23				
ELEM	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				
Мо	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				
Р	Phosphorus	609	557	583	572				
Zn	Zinc	769	755	764	705				
Mg	Magnesium	165	157	253	216				
Ва	Barium	0	0	0	0				
В	Boron	37	37	58	58				

	CLEANLINESS								
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23				
PARTIC	CLE COUNT - ISO 111	71:1999 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				
FERRO	US DEBRIS								
PQI	PQ Index	0	0	0	0				
VISUAL	VISUAL INSPECTION								
DEP	DEP	N	N	C1	A1				
DEP2	DEP2	N	N	DEB	DEB				



Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or component



PHONE: 03 9566 0666

Web: www.williamadams.com.au Email: SOSManager@wadams.com.au

WATER - HOTPLATE Water



#### FINAL DRIVE REAR LEFT

## 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

#### **EQUIP NUM: D3**

AFTER INSPECTION & SERVICE RESAMPLE AT THE NEXT SERVICE INTERVAL TO RE-EVALUATE CONDITION.



CAT D8T

#### **Monitor Compartment**

**SERIAL NUMBER: JJ501379** 

Interp By: Barry Swindells Interpreted On: 11-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. MONITOR ACTIVITY OVER THE NEXT FEW SAMPLES. RECOMMEND CHANGING OIL TO FLUSH THE COMPARTMENT.

SAMPLE INFORMATION						
			2			
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	Υ	N		
Filter Change	N	U	NA	N		
Total Fluid Added	0	0	0	0		

	PREVIOUS SAMPLE								
OIL RECOM	CONDITION	SATISFACTORY,	CONTINUE	SAMPLING	ΑТ	THE			
	For ad	ditional sample history, g	go to:	S.O.S WEB					
	CONDITION / CONTAMINATION								
		06-Apr-24	28-Jan-24	06-Nov-23	28-Ma	ar-23			
VISCO	OSITY (CENTISTO	KES) ASTM D445							
V40	Viscosity at 40 0	220.6	268.7	153.2	184.	8			
_									
INFR/	ARED (UFM) ASTM	I E2412							
OXI	Oxidation	7	8	7	6				

DDE //OUG CAMPLE

	WEAR LEVELS / ADDITIVES							
		06-Apr-24	28-Jan-24	06-Nov-23	28-Mar-23			
ELEME	ELEMENTAL ANALYSIS (PPM) ASTM D5185 [OIL] / ASTM D6130 [COOLANT]							
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			
Мо	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			
Р	Phosphorus	423	363	785	747			
Zn	Zinc	364	205	1056	961			
Mg	Magnesium	11	9	36	24			
Ва	Barium	0	0	0	0			
В	Boron	59	71	20	14			

	CLEANLINESS										
	06-Apr-24 28-Jan-24 06-Nov-23 28-Mar-23										
PARTIC	CLE COUNT - ISO 1117	1:1999 reported per	ISO 4406								
ISO	ISO Code Rating	18/12	19/16	20/14	21/17						
6μ	6μ	1736	4037	6245	18540						
14µ	14µ	27	548	145	769						
FERRO	US DEBRIS										
PQI	PQ Index	7	1	6	3						
VISUAL	. INSPECTION										
DEP	DEP	N	N	N	A1						
DEP2	DEP2	N	N	N	DEB						

