

## FINAL DRIVE RIGHT

EQUIP NUM: DZ1751

SERIAL NUMBER: 7PZ01011

CAT D11R



### Action Required

Interp By: Darron Rowley

Interpreted On: 01-Aug-22

T120-52210-0220

SAMPLE SHIP TIME (days) : 2

THIESS\_PTY\_LTD NSW

Mount Pleasant

RECEIVED DATE: 29-Jul-22

The PQ index, iron, aluminium and silicon appear elevated, possibly due to dirt entry. Check the seals, breathers and fill point for dirt entry points. Check any contamination capturing devices fitted for debris. Further investigative measures or repairs may be required. Suggest resample within 200 hrs to confirm the effectiveness of any adjustments or repairs. For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Darron Rowley. Phone (02) 4964 5057.

## SAMPLE INFORMATION



	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
Sampled Date	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
Sample Id	T120-52210-0220	T120-52136-1319	T120-52109-0514	T120-52101-0334
Lab Date	29-Jul-22	16-May-22	19-Apr-22	11-Apr-22
Meter [Hr]	43626.0	43130.0	43003.0	42898.0
Meter On Fluid	945.0	449.0	322.0	217.0
Fluid Brand	TOTAL	TOTAL	TOTAL	TOTAL
Fluid Weight	60	60	60	60
Fluid Type	DYNATRAN FD-1	DYNATRAN FD-1	DYNATRAN FD-1	DYNATRAN FD-1
Fluid Change	N	N	N	N
Filter Change	N	NA	N	N

## PREVIOUS SAMPLE

The PQ index, iron, aluminium and silicon are elevated possibly due to dirt entry and the oil is unsuitable for particle count testing. Check magnetic plug for abnormal ferrous material, if not already done. Check seals and breathers for dirt entry points. Resample after repairs or adjustments. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

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

## CONDITION-CONTAMINATION

	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
<b>OIL CONDITION</b>				
OXI Oxidation	5	8	9	9
SUL Sulfur Products	15	16	17	16
NIT Nitration	4	5	5	5

## VISCOSITY (Centistokes)

	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
V40 Viscosity at 40 C	211.0	176.5	235.4	333.4

## CRACKLE TEST

	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
W Water	N	N	N	N

## OIL CLEANLINESS

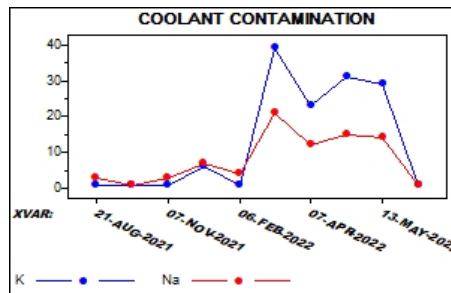
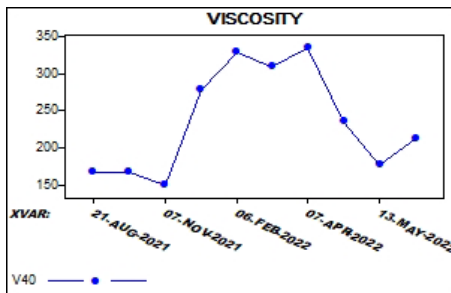
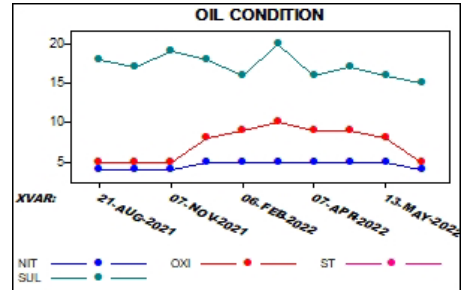
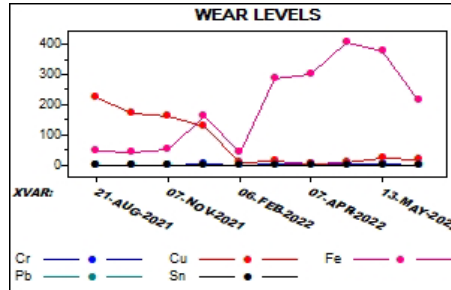
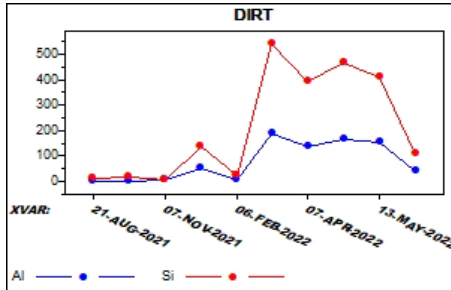
	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
<b>PARTICLE COUNT</b>				
ISO4 ISO4	23			24
ISO6 ISO6	22			23
ISO14 ISO14	16			20
PC Ra PC Rating		Dark	Dark	
4µ 4µ	72535			85262
6µ 6µ	28393			62405
10µ 10µ	2275			27972
14µ 14µ	336			8895
21µ 21µ	61			699
25µ 25µ	28			191
38µ 38µ	3			45
70µ 70µ	0			6

## PQI

	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
PQI PQ Index	64	190	146	108

## ADDITIVES-WEAR LEVELS

	27-Jul-22	13-May-22	14-Apr-22	07-Apr-22
<b>ELEMENTS (ppm) ASTM D6130</b>				
Cu Copper	19	23	8	4
Fe Iron	213	376	403	300
Cr Chromium	<1	3	3	2
Al Aluminum	38	152	166	136
Pb Lead	<1	<1	<1	<1
Sn Tin	<1	<1	<1	<1
Si Silicon	110	411	467	392
Na Sodium	<1	14	15	12
K Potassium	1	29	31	23
Mo Molybdenum	<1	<1	<1	<1
Ni Nickel	2	6	7	4
Ag Silver	<1	<1	<1	<1
Ti Titanium	<1	9	11	9
V Vanadium	0	0	0	0
Mn Manganese	0	4	4	3
Cd Cadmium	0	0	0	0
Ca Calcium	1153	665	334	257
P Phosphorus	492	363	272	247
Zn Zinc	376	151	36	17
Mg Magnesium	5	9	8	8
Ba Barium	0	1	1	0
B Boron	4	101	83	91
Sb Antimony	0	0	0	0



**REPORT COMMENT**

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

## FINAL DRIVE LEFT

EQUIP NUM: DZ1751

SERIAL NUMBER: 7PZ01011

CAT D11R



### Action Required

The oil viscosity (V40) appears to be reducing. Investigate possible oil transferring between compartments. Suggest resample within 200 hrs to confirm the effectiveness of any adjustments or repairs. For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Darron Rowley. Phone (02) 4964 5057.

Interp By: Darron Rowley  
Interpreted On: 01-Aug-22

T120-52210-0221

SAMPLE SHIP TIME (days) : 2

THIESS\_PTY\_LTD NSW

Mount Pleasant

RECEIVED DATE: 29-Jul-22

### SAMPLE INFORMATION



	27-Jul-22	13-May-22	07-Apr-22	21-Mar-22
Sampled Date	27-Jul-22	13-May-22	07-Apr-22	21-Mar-22
Sample Id	T120-52210-0221	T120-52136-1318	T120-52101-0335	T120-52081-1529
Lab Date	29-Jul-22	16-May-22	11-Apr-22	22-Mar-22
Meter [Hr]	43626.0	43130.0	42898.0	42681.0
Meter On Fluid	945.0	449.0	217.0	545.0
Fluid Brand	TOTAL	TOTAL	TOTAL	TOTAL
Fluid Weight	60	60	60	60
Fluid Type	DYNATRANS FD-1	DYNATRANS FD-1	DYNATRANS FD-1	DYNATRANS FD-1
Fluid Change	N	N	N	Y
Filter Change	N	NA	N	NA

### PREVIOUS SAMPLE

The oil viscosity (V40) is lower than the specification for the reported oil. The oil add pack indicates a possible oil transfer. All other test results appear to be acceptable. Continue to sample at recommended interval. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

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

### CONDITION-CONTAMINATION

	27-Jul-22	13-May-22	07-Apr-22	21-Mar-22
<b>OIL CONDITION</b>				
OXI Oxidation	5	6	7	12
SUL Sulfur Products	14	15	15	22
NIT Nitration	4	4	4	4

### VISCOSITY (Centistokes)

V40 Viscosity at 40 C	162.8	188.8	250.3	178.7
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### ADDITIVES-WEAR LEVELS

		27-Jul-22	13-May-22	07-Apr-22	21-Mar-22
<b>ELEMENTS (ppm) ASTM D6130</b>					
Cu	Copper	31	48	19	109
Fe	Iron	94	84	22	59
Cr	Chromium	<1	1	<1	1
Al	Aluminum	<1	4	1	2
Pb	Lead	<1	1	<1	1
Sn	Tin	<1	<1	<1	<1
Si	Silicon	7	12	5	7
Na	Sodium	<1	3	3	3
K	Potassium	<1	1	1	<1
Mo	Molybdenum	<1	<1	<1	<1
Ni	Nickel	<1	1	1	<1
Ag	Silver	<1	<1	<1	<1
Ti	Titanium	<1	<1	<1	<1
V	Vanadium	0	0	0	0
Mn	Manganese	0	1	0	1
Cd	Cadmium	0	0	0	0
Ca	Calcium	1974	1644	770	1221
P	Phosphorus	688	632	386	623
Zn	Zinc	634	474	200	548
Mg	Magnesium	5	3	2	2
Ba	Barium	0	0	0	0
B	Boron	14	69	83	76
Sb	Antimony	0	0	0	0

### CRACKLE TEST

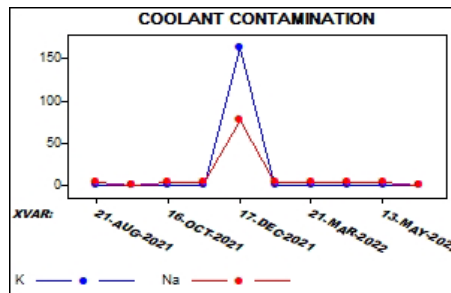
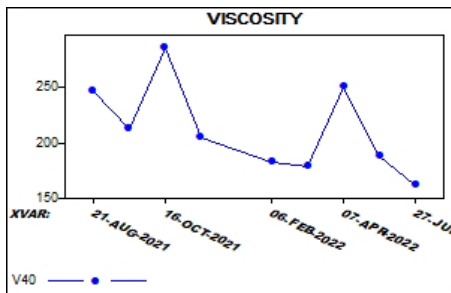
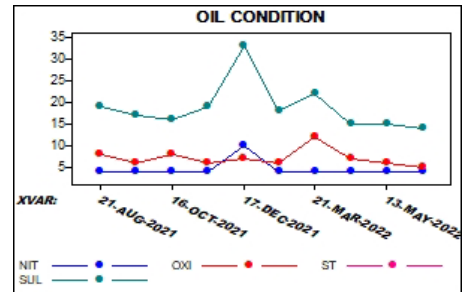
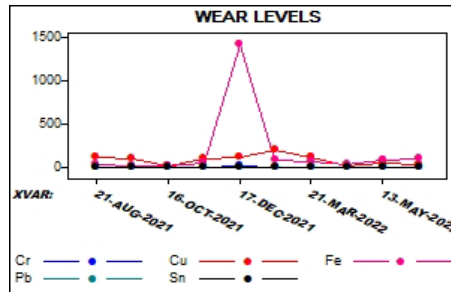
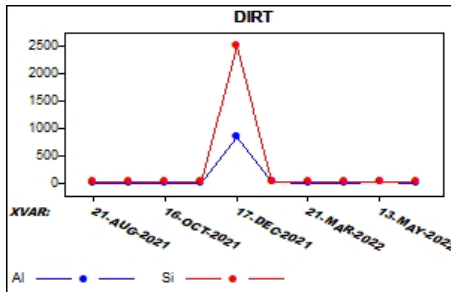
W	Water	N	N	N	N
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### OIL CLEANLINESS

		27-Jul-22	13-May-22	07-Apr-22	21-Mar-22
<b>PARTICLE COUNT</b>					
ISO4	ISO4	22	23	23	23
ISO6	ISO6	20	21	21	22
ISO14	ISO14	14	16	15	17
4µ	4µ	38192	59975	49448	64661
6µ	6µ	5672	16963	16876	25532
10µ	10µ	375	1578	1200	3709
14µ	14µ	85	383	173	880
21µ	21µ	15	105	42	152
25µ	25µ	5	57	22	56
38µ	38µ	0	11	3	4
70µ	70µ	0	1	1	0

### PQI

PQI	PQ Index	15	23	5	11
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**REPORT COMMENT**

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

**ENGINE**

**EQUIP NUM: DZ1751**

**SERIAL NUMBER: 7PZ01011**

**CAT D11R**

**No Action Required**

**Interp By: Darron Rowley**

**Interpreted On: 01-Aug-22**

**T120-52210-0108**

SAMPLE SHIP TIME (days) : 2

**THIESS\_PTY\_LTD NSW**

Mount Pleasant

RECEIVED DATE: 29-Jul-22

All test results appear normal. Continue to sample at consistent intervals. For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation; please contact Darron Rowley. Phone (02) 4964 5057.

**SAMPLE INFORMATION**

	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
Sampled Date	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
Sample Id	T120-52210-0108	T120-52185-0134	T120-52116-1342	T120-52109-0136
Lab Date	29-Jul-22	04-Jul-22	26-Apr-22	19-Apr-22
Meter [Hr]	43626.0	43411.0	43131.0	43003.0
Meter On Fluid	215.0	281.0	233.0	105.0
Fluid Brand	TOTAL	TOTAL	TOTAL	TOTAL
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	RUBIA WORKS	RUBIA WORKS	RUBIA WORKS	RUBIA WORKS
Fluid Change	Y	Y	N	N
Filter Change	Y	Y	N	N

**PREVIOUS SAMPLE**

All test results appear normal. Continue to sample at consistent intervals. For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation; please contact Darron Rowley. Phone (02) 4964 5057.

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

**CONDITION-CONTAMINATION**

	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
<b>OIL CONDITION</b>				
ST Soot	5	13	20	22
OXI Oxidation	13	21	26	25
SUL Sulfur Products	20	24	28	29
NIT Nitration	5	9	12	12

**VISCOSITY (Centistokes)**

V40	Viscosity at 40 C	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
V40	Viscosity at 40 C	113.2	116.8	125.2	125.0

**ADDITIVES-WEAR LEVELS**

ELEMENTS (ppm) ASTM D6130	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
Cu Copper	1	9	5	5
Fe Iron	14	20	61	33
Cr Chromium	<1	<1	1	<1
Al Aluminum	1	3	3	2
Pb Lead	<1	2	4	2
Sn Tin	<1	1	1	<1
Si Silicon	16	15	17	9
Na Sodium	2	6	2	2
K Potassium	<1	<1	<1	<1
Mo Molybdenum	42	51	53	54
Ni Nickel	<1	<1	<1	<1
Ag Silver	<1	<1	<1	<1
Ti Titanium	<1	<1	<1	<1
V Vanadium	0	0	0	0
Mn Manganese	1	1	1	1
Cd Cadmium	0	0	0	0
Ca Calcium	3686	3783	4453	4255
P Phosphorus	1044	1100	1198	1164
Zn Zinc	1281	1382	1403	1283
Mg Magnesium	10	53	10	14
Ba Barium	0	0	0	0
B Boron	487	472	487	483
Sb Antimony	0	0	0	0

**CRACKLE TEST**

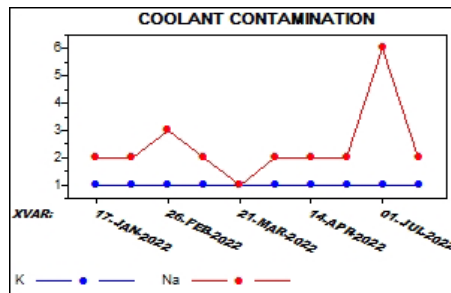
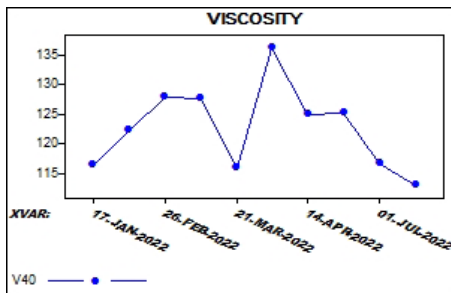
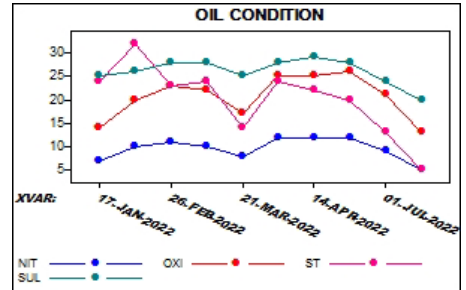
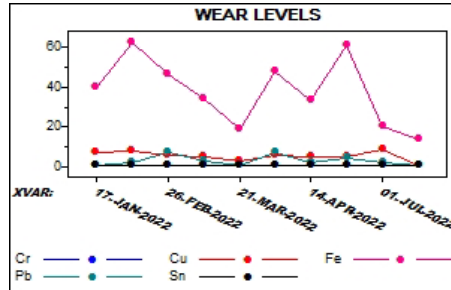
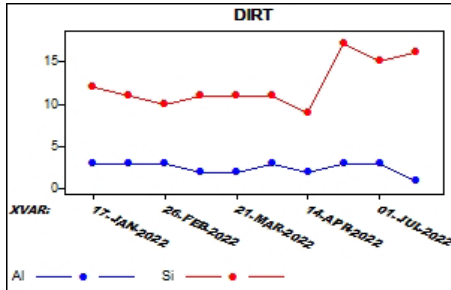
W	Water	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
W	Water	N	N	N	N

**FUEL**

F	Fuel	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
F	Fuel	N	N	N	N

**OIL CLEANLINESS**

PQI	PQ Index	27-Jul-22	01-Jul-22	23-Apr-22	14-Apr-22
PQI	PQ Index	4	2	16	6



## REPORT COMMENT

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

## HYDRAULIC SYSTEM

EQUIP NUM: DZ1751

SERIAL NUMBER: 7PZ01011

CAT D11R



### Monitor Compartment

Interp By: Nikayla Howe

Interpreted On: 01-Aug-22

T120-52210-0305

SAMPLE SHIP TIME (days) : 2

THIESS\_PTY\_LTD NSW

Mount Pleasant

RECEIVED DATE: 29-Jul-22

The aluminium and silicon are slightly high possibly due to dirt entry. Check fill points, seals and breathers for dirt entry points. All other test results appear to be acceptable. Continue to sample at recommended interval. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

### SAMPLE INFORMATION



	27-Jul-22	21-Mar-22	06-Feb-22	17-Dec-21
Sampled Date	27-Jul-22	21-Mar-22	06-Feb-22	17-Dec-21
Sample Id	T120-52210-0305	T120-52081-1117	T120-52038-1412	T120-51354-0204
Lab Date	29-Jul-22	22-Mar-22	07-Feb-22	20-Dec-21
Meter [Hr]	43626.0	42681.0	42136.0	41555.0
Meter On Fluid	945.0	2173.0	1628.0	1047.0
Fluid Brand	TOTAL	TOTAL	TOTAL	TOTAL
Fluid Weight	15W-40	15W-40	15W-40	15W-40
Fluid Type	RUBIA WORKS	RUBIA WORKS	RUBIA WORKS	
Fluid Change	N	Y	N	N
Filter Change	Y	Y	Y	Y

### PREVIOUS SAMPLE

The ISO cleanliness code for the 6 micron range is slightly high. As the oil and filters have reportedly been changed continue to monitor over future samples. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

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

### CONDITION-CONTAMINATION

	27-Jul-22	21-Mar-22	06-Feb-22	17-Dec-21
<b>OIL CONDITION</b>				
OXI Oxidation	8	6	7	3
SUL Sulfur Products	16	16	18	24
NIT Nitration	3	3	3	3

### VISCOSITY (Centistokes)

V40	Viscosity at 40 C	95.00	100.6	102.3	100.5
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### ADDITIVES-WEAR LEVELS

		27-Jul-22	21-Mar-22	06-Feb-22	17-Dec-21
<b>ELEMENTS (ppm) ASTM D6130</b>					
Cu	Copper	<1	1	1	1
Fe	Iron	8	4	4	5
Cr	Chromium	<1	<1	<1	1
Al	Aluminum	14	5	5	7
Pb	Lead	<1	<1	<1	<1
Sn	Tin	<1	<1	<1	<1
Si	Silicon	46	14	18	16
Na	Sodium	<1	2	2	2
K	Potassium	<1	1	1	1
Mo	Molybdenum	30	28	27	4
Ni	Nickel	<1	<1	<1	<1
Ag	Silver	<1	<1	<1	<1
Ti	Titanium	<1	<1	<1	1
V	Vanadium	0	0	0	0
Mn	Manganese	0	0	0	0
Cd	Cadmium	0	0	0	0
Ca	Calcium	3762	3185	3225	2271
P	Phosphorus	1127	1060	1114	1009
Zn	Zinc	1285	1292	1288	1168
Mg	Magnesium	12	9	9	6
Ba	Barium	0	0	0	0
B	Boron	396	356	365	46
Sb	Antimony	0	0	0	0

### CRACKLE TEST

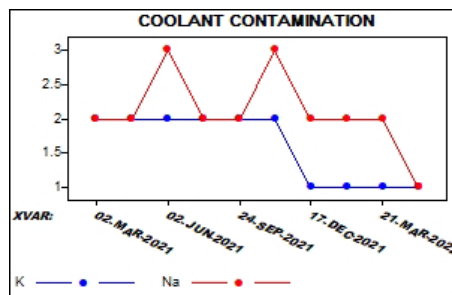
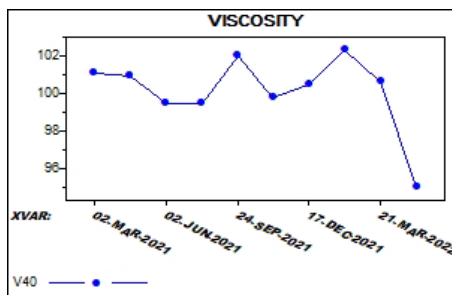
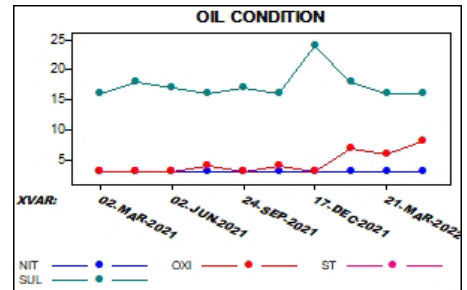
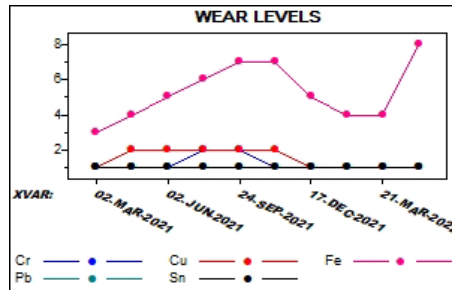
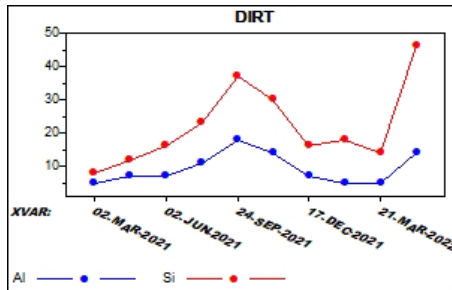
W	Water	N	N	N	N
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### OIL CLEANLINESS

		27-Jul-22	21-Mar-22	06-Feb-22	17-Dec-21
<b>PARTICLE COUNT</b>					
ISO4	ISO4	23	23	22	18
ISO6	ISO6	21	20	18	17
ISO14	ISO14	17	16	13	15
4µ	4µ	58448	40598	22438	1850
6µ	6µ	18472	8196	1352	1244
10µ	10µ	2913	1443	179	609
14µ	14µ	1125	524	73	304
21µ	21µ	375	157	25	97
25µ	25µ	201	75	14	43
38µ	38µ	36	11	2	1
70µ	70µ	10	1	0	0

### PQI

PQI	PQ Index	4	6	3	3
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**REPORT COMMENT**

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



**TRANSMISSION**

**EQUIP NUM: DZ1751**

**SERIAL NUMBER: 7PZ01011**

**CAT D11R**



**Action Required**

**Interp By: Nikayla Howe**

**Interpreted On: 01-Aug-22**

**T120-52210-0321**

SAMPLE SHIP TIME (days) : 2

**THIESS\_PTY\_LTD NSW**

Mount Pleasant

RECEIVED DATE: 29-Jul-22

The PQ index and iron are elevated and the oil is unsuitable for particle count testing. Check magnetic plug for abnormal ferrous material, if not already done. Resample after repairs or adjustments. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

**SAMPLE INFORMATION**



	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
Sampled Date	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
Sample Id	T120-52210-0321	T120-52081-1425	T120-52061-0744	T120-52048-0910
Lab Date	29-Jul-22	22-Mar-22	02-Mar-22	17-Feb-22
Meter [Hr]	43626.0	42681.0	42390.0	42248.0
Meter On Fluid	945.0	2173.0	1882.0	1740.0
Fluid Brand	TOTAL	TOTAL	TOTAL	TOTAL
Fluid Weight	30	30	30	30
Fluid Type	DYNATRANS ACX	DYNATRANS ACX	DYNATRANS ACX	DYNATRANS ACX
Fluid Change	Y	Y	N	N
Filter Change	Y	Y	N	N

**PREVIOUS SAMPLE**

The iron is elevated. Suggest inspecting system filter for wear metal and contaminants, if not already done. The elevated copper is possibly due to leaching. Leaching is a chemical reaction, not wear metal, no action required. All other test results appear to be acceptable. Continue to sample at recommended interval. \*\* For all sample information update requests please contact our EMC reception on 02 4964 5237. For technical enquiries regarding this evaluation, please contact Nikayla Howe Ph 02 4964 5056.

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

**CONDITION-CONTAMINATION**

	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
<b>OIL CONDITION</b>				
OXI Oxidation	6	3	3	4
SUL Sulfur Products	14	18	17	17
NIT Nitration	4	3	3	3

**ADDITIVES-WEAR LEVELS**

	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
<b>ELEMENTS (ppm) ASTM D6130</b>				
Cu Copper	62	193	130	401
Fe Iron	284	138	39	119
Cr Chromium	<1	1	<1	1
Al Aluminum	4	5	2	7
Pb Lead	3	2	1	1
Sn Tin	<1	<1	<1	1
Si Silicon	25	14	6	17
Na Sodium	<1	3	3	3
K Potassium	<1	1	1	<1
Mo Molybdenum	<1	<1	<1	<1
Ni Nickel	<1	<1	<1	<1
Ag Silver	<1	<1	<1	<1
Ti Titanium	<1	<1	<1	<1
V Vanadium	0	0	0	0
Mn Manganese	0	1	0	1
Cd Cadmium	0	0	0	0
Ca Calcium	3555	2142	2133	1933
P Phosphorus	946	972	974	939
Zn Zinc	1116	1051	1139	999
Mg Magnesium	11	5	5	7
Ba Barium	0	0	0	0
B Boron	1	19	14	20
Sb Antimony	0	0	0	0

**VISCOSITY (Centistokes)**

	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
V40 Viscosity at 40 C	103.3	108.8	105.0	114.0

**CRACKLE TEST**

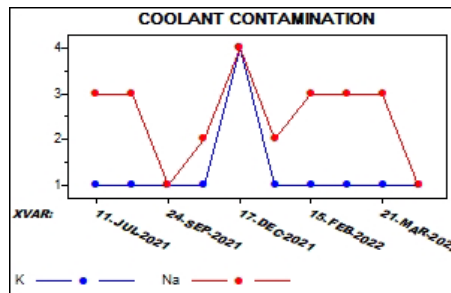
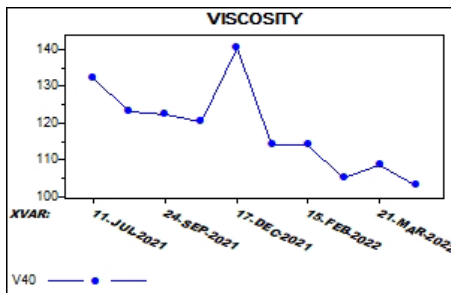
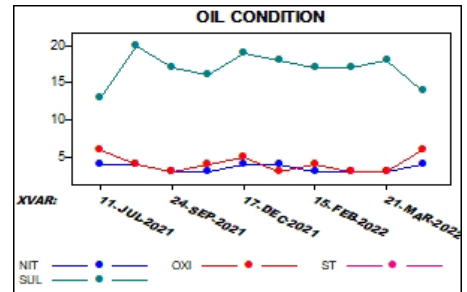
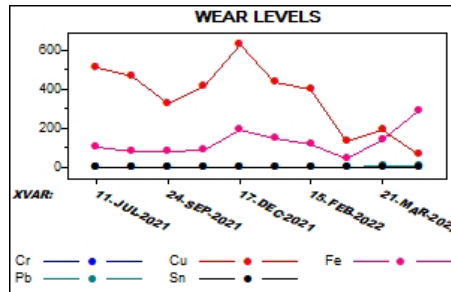
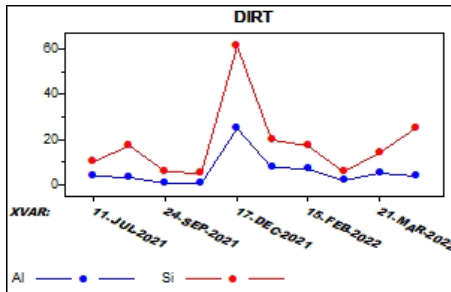
	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
W Water	N	N	N	N

**OIL CLEANLINESS**

	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
<b>PARTICLE COUNT</b>				
ISO4 ISO4		23	23	22
ISO6 ISO6		22	21	18
ISO14 ISO14		18	17	15
PC Ra PC Rating	Dark			
4µ 4µ		65500	42997	29662
6µ 6µ		22096	15229	2412
10µ 10µ		4851	3210	525
14µ 14µ		2370	1060	204
21µ 21µ		1001	303	69
25µ 25µ		592	164	38
38µ 38µ		94	35	8
70µ 70µ		3	2	1

**PQI**

	27-Jul-22	21-Mar-22	26-Feb-22	15-Feb-22
PQI PQ Index	166	36	11	26



**REPORT COMMENT**

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