

## LAMPIRAN

### Lampiran 1 Data Health\_Event Equipment EXCT62012

Machine_N-HE	CB6212 (Multiple Items)
EventLevel_D-HE	

Row Labels	Count of Duration
<b>Jul</b>	<b>4738</b>
<b>Attention! Next engine oil change falls due. (E.C. 561)(8205)</b>	<b>1</b>
19-Jul	1
<b>Battery voltage low (E.C. 2180)(8035)</b>	<b>1</b>
31-Jul	1
<b>Cable Break - Swing Pressure RH 1 Sensor (E.C. 1820)(2029)</b>	<b>1</b>
26-Jul	1
<b>Cable break at lubrication UPC pressure sensor (E.C. 4200)(2201)</b>	<b>3</b>
26-Jul	2
30-Jul	1
<b>Cable break at main pump 5 pressure sensor (E.C. 1771)(2121)</b>	<b>2</b>
25-Jul	1
30-Jul	1
<b>Cable break at main pump 6 pressure sensor (E.C. 1773)(2123)</b>	<b>1</b>
30-Jul	1
<b>Cable break at valve boom retract float (E.C. 5030)(2051)</b>	<b>1</b>
21-Jul	1
<b>Communication Error: LH Engine Controller (E.C. 510)(2071)</b>	<b>2</b>
21-Jul	2
<b>Communication Error: LH J1939 Engine Bus (E.C. 540)(2132)</b>	<b>5</b>
02-Jul	1
16-Jul	1
19-Jul	1
20-Jul	1
22-Jul	1
<b>Communication Error: Servo Controller (E.C. 500)(2070)</b>	<b>2</b>
21-Jul	2
<b>Communication with machine could not be established(215)</b>	<b>10</b>
02-Jul	2
03-Jul	3
15-Jul	3
27-Jul	2
<b>Contamination main pump 1 (E.C. 2790)(2147)</b>	<b>141</b>
12-Jul	10
13-Jul	2

14-Jul	5
15-Jul	45
16-Jul	21
17-Jul	7
18-Jul	8
19-Jul	43
<b>Contamination main pump 4 (E.C. 2940)(8048)</b>	<b>1</b>
30-Jul	1
<b>Contamination Servo Filter (E.C. 4440)(8356)</b>	<b>6</b>
19-Jul	1
20-Jul	1
21-Jul	1
25-Jul	1
26-Jul	2
<b>Control input derate is active (E.C. 1050)(8206)</b>	<b>31</b>
13-Jul	13
21-Jul	6
26-Jul	12
<b>Engine LH - Engine Air Filter 2 Differential Pressure High (F.C. 2809 / 15)(8423)</b>	<b>2</b>
31-Jul	2
<b>Engine LH - Engine Air Filter 2 Differential Pressure High (F.C. 2809 / 16)(8424)</b>	<b>2</b>
31-Jul	2
<b>Engine LH - Engine Coolant Temperature High (F.C. 110 / 15)(2274)</b>	<b>33</b>
01-Jul	1
12-Jul	7
13-Jul	3
14-Jul	1
19-Jul	4
20-Jul	7
21-Jul	4
22-Jul	2
24-Jul	1
26-Jul	3
<b>Engine LH - Engine Coolant Temperature High (F.C. 110 / 16)(2272)</b>	<b>12</b>
12-Jul	4
19-Jul	1
20-Jul	3
21-Jul	2
22-Jul	1
24-Jul	1
<b>Engine oil temperature too high (&gt; 85 degC) (E.C. 2120)(8278)</b>	<b>91</b>
01-Jul	2
04-Jul	3
12-Jul	16

13-Jul	6
14-Jul	1
19-Jul	11
20-Jul	9
21-Jul	15
22-Jul	6
23-Jul	4
24-Jul	9
25-Jul	1
26-Jul	1
27-Jul	1
28-Jul	3
30-Jul	3
<b>Engine PTO Temperature Too High (E.C. 2250)(2106)</b>	<b>24</b>
01-Jul	2
15-Jul	7
16-Jul	1
24-Jul	1
26-Jul	2
27-Jul	2
31-Jul	9
<b>Fuel Tank Level Low (E.C. 2190)(8036)</b>	<b>43</b>
03-Jul	17
04-Jul	1
06-Jul	1
07-Jul	9
17-Jul	1
21-Jul	1
28-Jul	12
29-Jul	1
<b>Grease system error, bucket cylinder cutoff active (E.C. 4003)(8345)</b>	<b>17</b>
02-Jul	2
13-Jul	1
19-Jul	1
20-Jul	1
21-Jul	3
23-Jul	2
24-Jul	1
25-Jul	1
26-Jul	1
27-Jul	1
30-Jul	1
31-Jul	2
<b>Hyd oil filter chamber 1 - bypass warning (E.C. 2874)(8317)</b>	<b>1</b>
15-Jul	1

<b>Hyd oil filter chamber 1 - pre-bypass warning (E.C. 2873)(8316)</b>	<b>13</b>
12-Jul	1
13-Jul	2
14-Jul	1
15-Jul	3
16-Jul	6
<b>Hyd oil filter chamber 2 - pre-bypass warning (E.C. 2877)(8320)</b>	<b>25</b>
13-Jul	4
14-Jul	5
15-Jul	9
16-Jul	7
<b>Hydraulic Oil Level Low (E.C. 1470)(2041)</b>	<b>11</b>
14-Jul	1
17-Jul	3
18-Jul	7
<b>Hydraulic oil temperature at suction manifold high (&gt; 75 degC) (E.C. 2247)(8282)</b>	<b>39</b>
04-Jul	2
12-Jul	1
13-Jul	2
16-Jul	5
17-Jul	3
18-Jul	2
20-Jul	7
21-Jul	4
23-Jul	3
26-Jul	4
27-Jul	5
28-Jul	1
<b>Hydraulic oil temperature at suction manifold too high (&gt; 80 degC) (E.C. 2248)(8283)</b>	<b>8</b>
13-Jul	5
21-Jul	1
26-Jul	2
<b>Machine communication not as expected(216)</b>	<b>38</b>
02-Jul	3
03-Jul	1
07-Jul	1
13-Jul	2
15-Jul	2
16-Jul	2
18-Jul	1
20-Jul	1
21-Jul	3
22-Jul	3
23-Jul	6

25-Jul	3
26-Jul	2
27-Jul	1
28-Jul	1
29-Jul	3
31-Jul	3
<b>Pressure sensor BoomHE - cable break (E.C. 1560)(8251)</b>	<b>1</b>
21-Jul	1
<b>Pressure sensor BoomHE - short circuit (E.C. 1561)(8252)</b>	<b>1</b>
17-Jul	1
<b>Pressure sensor BoomRE - cable break (E.C. 1562)(8253)</b>	<b>1</b>
21-Jul	1
<b>Pressure sensor BoomRE - short circuit (E.C. 1563)(8254)</b>	<b>51</b>
01-Jul	1
02-Jul	3
03-Jul	5
05-Jul	1
20-Jul	1
21-Jul	1
25-Jul	1
27-Jul	1
28-Jul	1
29-Jul	14
30-Jul	22
<b>Pressure sensor BucketHE - cable break (E.C. 1568)(8259)</b>	<b>1</b>
21-Jul	1
<b>Pressure sensor BucketRE - cable break (E.C. 1570)(8261)</b>	<b>4080</b>
01-Jul	56
02-Jul	30
03-Jul	43
04-Jul	30
05-Jul	11
06-Jul	344
07-Jul	444
08-Jul	539
13-Jul	375
14-Jul	128
15-Jul	30
16-Jul	118
17-Jul	187
18-Jul	193
19-Jul	866
20-Jul	105
21-Jul	24
22-Jul	38
23-Jul	54

24-Jul	24
25-Jul	8
26-Jul	272
27-Jul	35
28-Jul	32
29-Jul	40
30-Jul	54
<b>Pressure sensor hyd oil filter chamber 1 - cable break (E.C. 2871)(8314)</b>	<b>1</b>
30-Jul	1
<b>Pressure sensor hyd oil filter chamber 2 - cable break (E.C. 2875)(8318)</b>	<b>2</b>
13-Jul	2
<b>Pressure sensor StickHE - cable break (E.C. 1564)(8255)</b>	<b>1</b>
21-Jul	1
<b>Pressure sensor StickRE - cable break (E.C. 1566)(8257)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BOOM down (RE) Valve Block 1 - cable break (E.C. 1139)(8232)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BOOM down (RE) Valve Block 2 - cable break (E.C. 1140)(8233)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BOOM lift (HE) Valve Block 1 - cable break (E.C. 1141)(8234)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BOOM lift (HE) Valve Block 2 - cable break (E.C. 1142)(8235)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BUCKET dump (RE) Valve Block 1 - cable break (E.C. 1137)(8230)</b>	
21-Jul	
<b>Prop-valve BUCKET dump (RE) Valve Block 2 - cable break (E.C. 1138)(8231)</b>	
21-Jul	
<b>Prop-valve BUCKET load (HE) Valve Block 1 - cable break (E.C. 1135)(8228)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve BUCKET load (HE) Valve Block 2 - cable break (E.C. 1136)(8229)</b>	<b>4</b>
21-Jul	3
22-Jul	1
<b>Prop-valve hydraulic oil circulation - cable break (E.C. 2731)(8299)</b>	<b>2</b>
13-Jul	2
<b>Prop-valve STICK down (RE) Valve Block 1 - cable break (E.C. 1143)(8236)</b>	<b>1</b>
21-Jul	1

<b>Prop-valve STICK down (RE) Valve Block 2 - cable break (E.C. 1144)(8237)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve STICK up (HE) Valve Block 1 - cable break (E.C. 1145)(8238)</b>	<b>1</b>
21-Jul	1
<b>Prop-valve STICK up (HE) Valve Block 2 - cable break (E.C. 1146)(8239)</b>	<b>1</b>
21-Jul	1
<b>PTO Oil Level Low (E.C. 2810)(2150)</b>	<b>1</b>
16-Jul	1
<b>Relay for ladder operation is stuck (E.C. 1326)(8241)</b>	<b>2</b>
12-Jul	1
31-Jul	1
<b>Servo pressure 90bar below 80bar (E.C. 1626)(8269)</b>	<b>2</b>
31-Jul	2
<b>Temperature main pump 5 too high (E.C. 1081)(8219)</b>	<b>8</b>
13-Jul	1
18-Jul	2
21-Jul	4
26-Jul	1
<b>Temperature main pump 6 too high (E.C. 1082)(8220)</b>	<b>3</b>
13-Jul	1
21-Jul	2
<b>Aug</b>	<b>1289</b>
<b>Attention! Next engine oil change falls due. (E.C. 561)(8205)</b>	<b>4</b>
21-Aug	
22-Aug	1
26-Aug	1
28-Aug	1
29-Aug	1
<b>Cable Break - Swing Pressure LH 1 Sensor (E.C. 1800)(2027)</b>	<b>1</b>
24-Aug	
25-Aug	1
<b>Cable Break - Swing Pressure RH 1 Sensor (E.C. 1820)(2029)</b>	<b>1</b>
24-Aug	
25-Aug	1
<b>Communication Error: LH Engine Controller (E.C. 510)(2071)</b>	<b>1</b>
29-Aug	1
<b>Communication Error: LH J1939 Engine Bus (E.C. 540)(2132)</b>	<b>7</b>
03-Aug	1
14-Aug	1
15-Aug	1
17-Aug	1
19-Aug	1
24-Aug	1

30-Aug	1
<b>Communication Error: Servo Controller (E.C. 500)(2070)</b>	<b>1</b>
29-Aug	1
<b>Communication with machine could not be established(215)</b>	<b>13</b>
02-Aug	1
03-Aug	1
04-Aug	1
06-Aug	1
11-Aug	2
14-Aug	2
17-Aug	1
19-Aug	1
26-Aug	1
28-Aug	1
31-Aug	1
<b>Contamination main pump 1 (E.C. 2790)(2147)</b>	<b>23</b>
25-Aug	20
28-Aug	2
31-Aug	1
<b>Contamination main pump 2 (E.C. 2800)(2148)</b>	<b>1</b>
18-Aug	1
<b>Contamination Servo Filter (E.C. 4440)(8356)</b>	<b>5</b>
14-Aug	1
24-Aug	1
26-Aug	1
30-Aug	2
<b>Control input derate is active (E.C. 1050)(8206)</b>	<b>153</b>
07-Aug	115
08-Aug	11
18-Aug	9
22-Aug	14
23-Aug	4
<b>Engine Air Inlet Temperature(67)</b>	<b>1</b>
24-Aug	1
<b>Engine LH - Engine Air Filter 2 Differential Pressure High (F.C. 2809 / 15)(8423)</b>	<b>18</b>
05-Aug	3
06-Aug	1
10-Aug	1
19-Aug	1
22-Aug	3
23-Aug	5
24-Aug	4
<b>Engine LH - Engine Air Filter 2 Differential Pressure High (F.C. 2809 / 16)(8424)</b>	<b>13</b>
05-Aug	1

06-Aug	1
19-Aug	1
22-Aug	2
23-Aug	5
24-Aug	3
<b>Engine LH - Engine Coolant Temperature High (F.C. 110 / 15)(2274)</b>	<b>2</b>
07-Aug	2
<b>Engine LH - Fuel Filter Restriction (F.C. 95 / 15)(8410)</b>	<b>4</b>
22-Aug	4
<b>Engine LH - Fuel Filter Restriction (F.C. 95 / 16)(8411)</b>	<b>2</b>
22-Aug	2
<b>Engine oil temperature too high (&gt; 85 degC) (E.C. 2120)(8278)</b>	<b>16</b>
06-Aug	1
07-Aug	1
08-Aug	3
10-Aug	2
11-Aug	2
13-Aug	3
16-Aug	1
18-Aug	1
23-Aug	1
25-Aug	1
<b>Engine PTO Temperature Too High (E.C. 2250)(2106)</b>	<b>38</b>
01-Aug	2
02-Aug	1
07-Aug	1
13-Aug	3
17-Aug	
18-Aug	8
19-Aug	6
20-Aug	3
21-Aug	5
22-Aug	2
23-Aug	3
24-Aug	1
30-Aug	3
<b>Engine Turbocharger 1 Compressor Inlet Pressure(160)</b>	
29-Aug	
<b>Engine Turbocharger 2 Compressor Inlet Pressure(161)</b>	<b>3</b>
24-Aug	2
29-Aug	1
<b>Fuel Tank Level Low (E.C. 2190)(8036)</b>	<b>5</b>
07-Aug	2
08-Aug	2
11-Aug	1

<b>Grease system error, bucket cylinder cutoff active (E.C. 4003)(8345)</b>	<b>27</b>
01-Aug	1
02-Aug	1
03-Aug	2
05-Aug	1
08-Aug	1
10-Aug	1
12-Aug	1
13-Aug	1
14-Aug	1
16-Aug	1
17-Aug	2
19-Aug	1
22-Aug	1
24-Aug	1
25-Aug	2
26-Aug	2
28-Aug	2
29-Aug	1
30-Aug	3
31-Aug	1
<b>Grease system pulse / pause too long (E.C. 4001)(8060)</b>	<b>1</b>
26-Aug	1
<b>Hand lever left error (E.C. 5200)(2062)</b>	<b>1</b>
28-Aug	1
<b>Hand lever right error (E.C. 5210)(2063)</b>	<b>1</b>
28-Aug	1
<b>Hydraulic Oil Level Low (E.C. 1470)(2041)</b>	<b>41</b>
07-Aug	2
09-Aug	5
12-Aug	9
13-Aug	12
21-Aug	5
23-Aug	3
24-Aug	1
29-Aug	4
<b>Hydraulic Oil Level Very Low (E.C. 1480)(8249)</b>	<b>6</b>
13-Aug	3
21-Aug	1
23-Aug	2
<b>Hydraulic oil temperature at suction manifold high (&gt; 75 degC) (E.C. 2247)(8282)</b>	<b>39</b>
06-Aug	1
07-Aug	4
08-Aug	4

09-Aug	4
10-Aug	2
12-Aug	1
13-Aug	7
16-Aug	1
18-Aug	2
19-Aug	2
22-Aug	3
23-Aug	5
24-Aug	1
30-Aug	2
<b>Hydraulic oil temperature at suction manifold too high (&gt; 80 degC)</b>	
<b>(E.C. 2248)(8283)</b>	<b>34</b>
07-Aug	23
08-Aug	5
18-Aug	2
22-Aug	2
23-Aug	2
<b>Machine communication not as expected(216)</b>	<b>59</b>
01-Aug	2
02-Aug	1
03-Aug	1
04-Aug	
05-Aug	1
06-Aug	1
07-Aug	1
08-Aug	3
10-Aug	1
11-Aug	2
12-Aug	4
13-Aug	1
14-Aug	4
15-Aug	2
16-Aug	1
17-Aug	4
18-Aug	2
19-Aug	2
20-Aug	3
21-Aug	2
22-Aug	3
23-Aug	1
24-Aug	1
25-Aug	1
27-Aug	1
28-Aug	2
29-Aug	7

30-Aug	3
31-Aug	2
<b>Pressure sensor BoomRE - short circuit (E.C. 1563)(8254)</b>	<b>137</b>
02-Aug	60
04-Aug	24
05-Aug	4
06-Aug	3
07-Aug	2
09-Aug	1
10-Aug	2
11-Aug	1
14-Aug	2
21-Aug	3
23-Aug	4
24-Aug	3
26-Aug	1
27-Aug	2
28-Aug	9
30-Aug	12
31-Aug	4
<b>Pressure sensor BucketRE - cable break (E.C. 1570)(8261)</b>	<b>425</b>
06-Aug	3
07-Aug	1
10-Aug	2
11-Aug	20
13-Aug	3
14-Aug	2
15-Aug	113
19-Aug	5
21-Aug	26
22-Aug	156
23-Aug	1
24-Aug	8
25-Aug	37
26-Aug	16
27-Aug	27
29-Aug	4
30-Aug	1
<b>Prop-valve hydraulic oil circulation - cable break (E.C. 2731)(8299)</b>	<b>150</b>
14-Aug	1
17-Aug	58
18-Aug	86
26-Aug	1
29-Aug	4
<b>PTO Oil Level Low (E.C. 2810)(2150)</b>	<b>9</b>
10-Aug	4

11-Aug	1
12-Aug	3
14-Aug	1
<b>PTO Oil Pressure Low (E.C. 2870)(8313)</b>	<b>1</b>
18-Aug	1
<b>Relay for ladder operation is stuck (E.C. 1326)(8241)</b>	<b>7</b>
14-Aug	2
18-Aug	1
31-Aug	4
<b>Sensor for ladder up is damaged (E.C. 1328)(8243)</b>	<b>1</b>
31-Aug	1
<b>Servo pressure 90bar below 80bar (E.C. 1626)(8269)</b>	<b>2</b>
03-Aug	2
<b>Servo valve - short circuit (E.C. 1052)(8208)</b>	<b>9</b>
03-Aug	9
<b>Temperature main pump 2 too high (E.C. 1062)(8214)</b>	<b>1</b>
18-Aug	1
<b>Temperature main pump 5 too high (E.C. 1081)(8219)</b>	<b>18</b>
07-Aug	2
08-Aug	2
09-Aug	3
13-Aug	1
16-Aug	1
18-Aug	1
22-Aug	2
23-Aug	6
<b>Temperature main pump 6 too high (E.C. 1082)(8220)</b>	<b>8</b>
07-Aug	2
08-Aug	1
09-Aug	1
18-Aug	1
22-Aug	1
23-Aug	2
<b>Sep</b>	<b>3759</b>
<b>Cable break at ambient air temperature (E.C. 4260)(2203)</b>	
29-Sep	
<b>Cable break at LH hydraulic oil temperature (E.C. 2245)(8038)</b>	<b>1</b>
29-Sep	1
<b>Cable break at lubrication UPC pressure sensor (E.C. 4200)(2201)</b>	<b>1</b>
17-Sep	1
29-Sep	
<b>Cable break at valve swing left (E.C. 5140)(2060)</b>	<b>1</b>
23-Sep	1
<b>Cable break at valve swing right (E.C. 5150)(2061)</b>	<b>1</b>
23-Sep	1
<b>Communication Error: LH Engine Controller (E.C. 510)(2071)</b>	<b>3</b>

02-Sep	1
06-Sep	2
<b>Communication Error: LH J1939 Engine Bus (E.C. 540)(2132)</b>	<b>4</b>
05-Sep	2
23-Sep	2
<b>Communication Error: Servo Controller (E.C. 500)(2070)</b>	<b>3</b>
02-Sep	1
06-Sep	2
<b>Communication with machine could not be established(215)</b>	<b>22</b>
04-Sep	4
07-Sep	1
09-Sep	1
11-Sep	5
13-Sep	
14-Sep	1
15-Sep	1
16-Sep	1
21-Sep	1
23-Sep	2
27-Sep	3
30-Sep	2
<b>Contamination main pump 1 (E.C. 2790)(2147)</b>	<b>478</b>
04-Sep	1
10-Sep	2
12-Sep	1
13-Sep	2
14-Sep	30
15-Sep	63
16-Sep	129
17-Sep	138
18-Sep	108
19-Sep	1
20-Sep	2
23-Sep	1
<b>Contamination main pump 4 (E.C. 2940)(8048)</b>	<b>1</b>
27-Sep	1
<b>Contamination Servo Filter (E.C. 4440)(8356)</b>	<b>7</b>
02-Sep	1
06-Sep	1
07-Sep	1
10-Sep	2
26-Sep	1
29-Sep	1
<b>Control input derate is active (E.C. 1050)(8206)</b>	<b>6</b>
29-Sep	6
<b>Engine LH - Engine Coolant Temperature High (F.C. 110 / 15)(2274)</b>	<b>1</b>

14-Sep	1
<b>Engine oil temperature too high (&gt; 85 degC) (E.C. 2120)(8278)</b>	<b>12</b>
08-Sep	1
13-Sep	2
14-Sep	6
15-Sep	1
19-Sep	1
22-Sep	1
<b>Engine PTO Temperature Too High (E.C. 2250)(2106)</b>	<b>18</b>
12-Sep	2
13-Sep	7
14-Sep	5
15-Sep	1
27-Sep	1
28-Sep	2
<b>Fuel Tank Level Low (E.C. 2190)(8036)</b>	<b>27</b>
19-Sep	6
20-Sep	2
24-Sep	3
25-Sep	14
26-Sep	1
29-Sep	1
<b>Grease system error, bucket cylinder cutoff active (E.C. 4003)(8345)</b>	<b>33</b>
01-Sep	2
02-Sep	2
05-Sep	2
06-Sep	2
07-Sep	5
08-Sep	1
10-Sep	3
12-Sep	1
13-Sep	1
14-Sep	1
17-Sep	1
20-Sep	1
23-Sep	5
26-Sep	3
29-Sep	1
30-Sep	2
<b>Grease working cycle time elapsed (E.C. 4002)(8344)</b>	<b>1</b>
17-Sep	1
<b>Hyd oil filter chamber 2 - pre-bypass warning (E.C. 2877)(8320)</b>	<b>18</b>
13-Sep	3
14-Sep	1
15-Sep	5

16-Sep	1
17-Sep	6
18-Sep	2
<b>Hydraulic Oil Level Low (E.C. 1470)(2041)</b>	<b>21</b>
10-Sep	5
22-Sep	16
29-Sep	
<b>Hydraulic Oil Level Very Low (E.C. 1480)(8249)</b>	<b>3</b>
10-Sep	2
29-Sep	1
<b>Hydraulic oil temperature at suction manifold high (&gt; 75 degC) (E.C. 2247)(8282)</b>	<b>32</b>
12-Sep	3
13-Sep	2
14-Sep	3
15-Sep	5
20-Sep	3
21-Sep	4
22-Sep	1
29-Sep	11
<b>Hydraulic oil temperature at suction manifold too high (&gt; 80 degC) (E.C. 2248)(8283)</b>	<b>8</b>
29-Sep	8
<b>Machine communication not as expected(216)</b>	<b>62</b>
01-Sep	4
02-Sep	7
04-Sep	1
05-Sep	3
06-Sep	7
07-Sep	5
08-Sep	3
09-Sep	1
10-Sep	5
11-Sep	1
12-Sep	3
13-Sep	1
14-Sep	2
17-Sep	2
18-Sep	2
20-Sep	1
23-Sep	2
26-Sep	3
27-Sep	1
29-Sep	4
30-Sep	4
<b>Pressure sensor BoomRE - cable break (E.C. 1562)(8253)</b>	<b>1</b>

06-Sep	1
<b>Pressure sensor BoomRE - short circuit (E.C. 1563)(8254)</b>	<b>20</b>
01-Sep	1
02-Sep	2
03-Sep	3
04-Sep	1
07-Sep	1
08-Sep	2
09-Sep	1
12-Sep	1
21-Sep	1
22-Sep	1
23-Sep	1
24-Sep	1
28-Sep	1
30-Sep	3
<b>Pressure sensor BucketHE - cable break (E.C. 1568)(8259)</b>	
29-Sep	
<b>Pressure sensor BucketRE - cable break (E.C. 1570)(8261)</b>	<b>2867</b>
01-Sep	4
02-Sep	24
03-Sep	1053
04-Sep	548
05-Sep	1180
06-Sep	58
29-Sep	
<b>Pressure sensor hyd oil cooler - cable break (E.C. 2151)(8279)</b>	<b>1</b>
29-Sep	1
<b>Pressure sensor hyd oil filter chamber 1 - cable break (E.C. 2871)(8314)</b>	
29-Sep	
<b>Pressure sensor hyd oil filter chamber 2 - cable break (E.C. 2875)(8318)</b>	<b>1</b>
15-Sep	1
29-Sep	
<b>Pressure sensor pilot 90bar - cable break (E.C. 1627)(8270)</b>	
29-Sep	
<b>Pressure sensor swing park brake - cable break (E.C. 1664)(2097)</b>	
29-Sep	
<b>Prop-valve hydraulic oil circulation - cable break (E.C. 2731)(8299)</b>	<b>75</b>
04-Sep	4
05-Sep	2
06-Sep	1
20-Sep	29
21-Sep	39
<b>PTO Oil Level Low (E.C. 2810)(2150)</b>	<b>1</b>

17-Sep	1
<b>Relay for ladder operation is inoperable (E.C. 1325)(8240)</b>	<b>2</b>
23-Sep	2
<b>Relay for ladder operation is stuck (E.C. 1326)(8241)</b>	<b>2</b>
25-Sep	
26-Sep	2
<b>Servo controller - No ground for SLOT F of output baby board. (E.C. 1697)(8273)</b>	
29-Sep	
<b>Servo pressure 90bar below 80bar (E.C. 1626)(8269)</b>	<b>3</b>
23-Sep	3
<b>Servo valve - short circuit (E.C. 1052)(8208)</b>	<b>4</b>
03-Sep	4
<b>Temperature main pump 2 too high (E.C. 1062)(8214)</b>	<b>1</b>
27-Sep	1
<b>Temperature main pump 4 too high (E.C. 1072)(8217)</b>	<b>15</b>
19-Sep	15
<b>Temperature main pump 5 too high (E.C. 1081)(8219)</b>	<b>2</b>
15-Sep	1
21-Sep	1
<b>Grand Total</b>	<b>9786</b>

## Lampiran 2 Data Daily Monitoring Breakdown (DMBD) Unit CAT 6020

Model Unit (long)	Equipment	BD Category	BD Description	Duration (hour)	Breakdown Date	Breakdown Time	Object part code group text
6020B	EXCT62017	MTC Unschedule	Engine Shutdown / lokasi Jln Expander /HM 22858	1.15	01-07-2025	08:17:34	ELECTRICS
6020B	EXCT62006	MTC Unschedule	WORK LAMP OFF	1.25	01-07-2025	18:48:25	ELECTRICS
6020B	EXCT62017	MTC Unschedule	Engine Shutdown & Oli Hydraulic Kering / lokasi Jalan McLaren /HM 22871.4	1.32	01-07-2025	02:52:15	ELECTRICS
6020B	EXCT62010	MTC Unschedule	Cant Strat, Panel Warning Engine on / lokasi Jalan McLaren /HM 32921	0.53	02-07-2025	05:32:32	ELECTRICS
6020B	EXCT62018	MTC Unschedule	ENGINE SHUTDOWN	1.45	01-07-2025	23:45:48	ELECTRICS
6020B	EXCT62008	MTC Unschedule	PTO temperatur high / lokasi Jimny /HM 35717	1.13	03-07-2025	15:22:58	ELECTRICS
6020B	EXCT62014	MTC Unschedule	LOW POWER, OVERHEAT HYD, EVERHEAT RADIA	1.82	03-07-2025	11:22:00	ELECTRICS
6020B	EXCT62010	MTC Unschedule	JOYSTICK SEBELAH KANAN LEPAS / LOKASI	0.45	02-07-2025	06:46:30	ELECTRICS
6020B	EXCT62010	MTC Unschedule	CANT START / LOKASI MCLAREN /HM 32947.3	0.28	04-07-2025	01:04:44	ELECTRICS
6020B	EXCT62017	MTC Unschedule	ENGINE SHUTDOWN & OLI HYDROLIC LOW	8.35	04-07-2025	14:23:00	ELECTRICS
6020B	EXCT62010	MTC Unschedule	ENGINE SHUTDOWN & HOSE HYDROLIC PECAH /	4.38	05-07-2025	09:30:42	ELECTRICS
6020B	EXCT62012	MTC Unschedule	LOW POWER, BOOM ABNORMAL & TEMPERATURE C	1.38	06-07-2025	14:37:07	ELECTRICS
6020B	EXCT62010	MTC Unschedule	HANDLE JOY STICK BROKEN	3.02	07-07-2025	15:02:29	ELECTRICS
6020B	EXCT62011	MTC Unschedule	WORK LAMP OFF	0.77	08-07-2025	20:56:35	ELECTRICS
6020B	EXCT62011	MTC Unschedule	ALL WORK LAMP OFF	1.07	08-07-2025	03:12:57	ELECTRICS
6020B	EXCT62008	MTC Unschedule	OVERHEAT HIDROLIK LOW POWER	0.65	09-07-2025	14:43:50	ELECTRICS
6020B	EXCT62012	MTC Unschedule	LAMPU ATAS CABIN TERTURUN & LAMPU TANGKI	0.80	11-07-2025	18:46:32	ELECTRICS
6020B	EXCT62011	MTC Unschedule	OVERHEAT HYDROLIC & LOW POWER / LOKASI	0.38	12-07-2025	15:05:15	ELECTRICS
6020B	EXCT62008	MTC Unschedule	ENGINE SHUTDOWN	1.25	13-07-2025	08:01:04	ELECTRICS
6020B	EXCT62015	MTC Unschedule	LOW POWER ENGINE	1.37	13-07-2025	14:00:06	ELECTRICS
6020B	EXCT62012	MTC Unschedule	OVEHEAT HYDROLIC & LOW POWER / LOKASI J	1.53	13-07-2025	15:10:12	ELECTRICS
6020B	EXCT62014	MTC Unschedule	CANT START	3.33	16-07-2025	01:03:34	ELECTRICS
6020B	EXCT62014	MTC Unschedule	CANT RUNNING / LOKASI ASTIN /HM 35388	1.82	15-07-2025	06:40:29	ELECTRICS
6020B	EXCT62012	MTC Unschedule	LOW POWER BOOM	1.78	19-07-2025	03:48:41	ELECTRICS
6020B	EXCT62012	MTC Unschedule	ATTACKMENT ENGELOCK	1.48	18-07-2025	06:07:11	ELECTRICS
6020B	EXCT62012	MTC Unschedule	RPM TIDAK MAU NAIK , ATTACMENT NGELOCK /	0.80	20-07-2025	18:40:01	ELECTRICS
6020B	EXCT62011	MTC Unschedule	LAMPU KERJA BOOM LEPAS DARI BRAKET / LOK	0.73	21-07-2025	01:04:47	ELECTRICS
6020B	EXCT62018	MTC Unschedule	ARM MACET2, NO VALID SIGNAL HAND B/D / L	1.12	21-07-2025	01:44:33	ELECTRICS
6020B	EXCT62015	MTC Unschedule	LAMP WORK OFF / LOKASI ASTIN 2 /HM 364	7.33	20-07-2025	19:03:36	ELECTRICS
6020B	EXCT62017	MTC Unschedule	LAMPU KERJA MATI2 ABNORMAL / LOKASI JAL	0.68	23-07-2025	20:40:00	ELECTRICS
6020B	EXCT62008	MTC Unschedule	ATTACHMENT ABN, MAINPUMP NO 4 MULFUNCTIO	0.98	23-07-2025	07:10:09	ELECTRICS
6020B	EXCT62014	MTC Unschedule	ENGINE SHUTDOWN & OLI HYDROLIC LOW / LOK	0.95	24-07-2025	05:58:55	ELECTRICS
6020B	EXCT62006	MTC Unschedule	LAMPU KERJA MATI SEMUA	1.37	24-07-2025	18:45:52	ELECTRICS
6020B	EXCT62014	MTC Unschedule	ENGINE SHUTDOWN, OLI HYDROLIC DI BAWAH L	5.55	23-07-2025	23:24:29	ELECTRICS
6020B	EXCT62012	MTC Unschedule	BUCKET NGELOCK / LOKASI T300 DEKAT HIT	3.17	25-07-2025	02:19:49	ELECTRICS
6020B	EXCT62014	MTC Unschedule	ATTACHMENT LOW POWER	0.70	28-07-2025	03:52:04	ELECTRICS
6020B	EXCT62019	MTC Unschedule	LAMPU KERJA DI ATAS KABIN OFF / LOKASI	0.98	29-07-2025	18:54:40	ELECTRICS
6020B	EXCT62006	MTC Unschedule	WORK LAMP OFF	0.68	30-07-2025	21:35:27	ELECTRICS
6020B	EXCT62017	MTC Unschedule	LAMPU KERJA MATI / LOKASI EXPANDER /HM	0.77	31-07-2025	19:07:47	ELECTRICS

6020B	EXCT62015	MTC Unschedule	BRACKET JOYTIC KIRI PATAH / LOKASI JALAN	2.08	31-07-2025	08:50:52	ELECTRICS
6020B	EXCT62006	MTC Unschedule	ARM LOW POWER / LOKASI JLN PONTIAC /HM	1.38	31-07-2025	22:37:00	ELECTRICS
6020B	EXCT62011	MTC Unschedule	BRACKET HANDLE JOY STICK PATAH / LOKASI	1.50	31-07-2025	06:39:36	ELECTRICS

Equipment	BD Date	BD Sub Type	Description	Activity Text
EXCT62011	8/18/2025	MTC Unschedule	LOW POWER ENGINE	ADD OIL SWING, CEK LOW POWER, CEK PRESSURE HYD, CEK RPM ENGINE ( MATERIAL BATU )
EXCT62012	9/30/2025	MTC Unschedule	AC HOT / LOKASI KATANA /HM 23730	REPLACE PIN CONECTOR SENSOR HIGH PRESSURE
EXCT62014	9/29/2025	MTC Unschedule	SWING LOW POWER / LOKASI ASTIN /HM 3653	REPAIR HARNESS COIL MP 2, _REPLACE PRESSURE SENSOR SWING 1PC, _REORING MAKE UP BLOCK HPS 4PC, _LEVEL
EXCT62010	9/28/2025	MTC Unschedule	HORN OFF NOT FUCTION	REPLACE COMPRESSOR HORN, REPLACE RELAY HORN JAMED, TES OK
EXCT62019	9/27/2025	MTC Unschedule	CANT SWING / LOKASI JIMNY /HM 22931.8	REPLACE COIL 35 BAR (SHORT), RELEASE FUSE 1F6, CEK MP
EXCT62006	9/24/2025	MTC Unschedule	CANT START - BUCKET ENGELOCK	REPLACE ALTERNATOR, REPLACE BATTERY 6 PCS, REPAIR & CLEANING SECUN CABLE BATTERY TO ALTERNATOR, A
EXCT62010	9/23/2025	MTC Unschedule	CANT START / LOKASI MCLAREN /HM 34230.4	TIGHTENING CABLE BATTERE, TEST RUNNING
EXCT62011	9/22/2025	MTC Unschedule	ATACMENT ARM NGELOCK / LOKASI IRIAN /H	CHECK ARM STICK STUCK, MEASUREMENT VOLTAGE PRESSURE SENSOR ARM STICK OK, CHANGE PRESSURE SENSOR A
EXCT62010	9/20/2025	MTC Unschedule	CANT RUNNIG / LOKASI JALAN MCLAREN2 /HM	REPLACE STARTING MOTOR LH, ADD OIL HYDRAULIC, ADD OIL ENGINE, GROUND TEST
EXCT62011	9/19/2025	MTC Unschedule	ARM NGELOCK /35130/JL. IRIAN	PROGRES CHECK HARNESS BOOM, REPAIR HARNESS PUMP PRESSURE 2 (PRESSURE 66 BAR SAAT UNIT ON,INTERMITE
EXCT62011	9/16/2025	MTC Schedule	EK EROR,RESET BATERAI,CEK FUSE BREAKER,M	EK EROR,RESET BATERAI,CEK FUSE BREAKER,MAKE WIRING HYDROLIK TEMPERATURE SENSORE TO CONECTOR X25,CEK
EXCT62006	9/16/2025	MTC Schedule	SCHEDULE FOLLOW UP HYD	CHECK POWER LADDER INTERMITEN , CONTINUITY HARNESS LADDER, CLEANING SWITCH LADDER, REPLACE RELAY
EXCT62006	9/11/2025	MTC Unschedule	TRACK KANAN MACET	RE HARNES PROPORSIONAL SOLENOID PUMP 3
EXCT62017	9/10/2025	MTC Unschedule	CANT START / LOKASI PONTIAK /HM 24005.9	REPAIR HARNES C STARTING MOTOR LH, G/T
EXCT62011	9/10/2025	MTC Unschedule	ARM NGE-LOCK/ IRIAN / HM 35019	RESET BATTERY, _ CLEAN UP HARNES SELENOID, LINE ARM, _ ADD OLI HYD & SWING, _ GROUTTEST
EXCT62006	9/9/2025	MTC Unschedule	6020.06 / 37006.04 / ATTACHMENT MACET, /	REPAIR HARNES AREA MAIN PUMP, KALIBRASI SPOOL BOOM.STICK .BUCKET, HPC CHECK ALL MAIN PUMP
EXCT62010	9/8/2025	MTC Unschedule	CANT START	RESTART BATRE
EXCT62015	9/6/2025	MTC Unschedule	LOW POWER (BUCKET TIDAK MAU DI ANGKAT)	REPAIR HARNES SOLENOIT
EXCT62014	9/4/2025	MTC Unschedule	HYD OVER HEAT / LOKASI ASTIN /HM 36614	REPLACE SIRKULATING PUMP , REPAIR HARNESS COIL SIRKULATING PUMP, WASHING UNIT, RECHARGE FIRE, GROUT
EXCT62019	9/3/2025	MTC Schedule	SCH FOLLOW UP HYD OVER HEAT	CHECK UNIT CAN'T START,BATTERY DROP,REPLACE BATTERY 6 PCS,CHECK CHARGING SYSTEM
EXCT62019	9/3/2025	MTC Unschedule	CANT START / LOKASI JINMY /HM 22550.7	JEMPER BATTREY
EXCT62012	9/3/2025	MTC Unschedule	ATTACHMENT LOCK	REPLACE SELENOID 35 BAR ASSY CATRIDGE
EXCT62019	9/3/2025	MTC Unschedule	CANT START / LOKASI JIMNY /HM 22541.2	CHECK CANT START ,CHECK IN + OUT ALTERNATOR
EXCT62012	9/2/2025	MTC Unschedule	MAIN WORK LAMP OFF, TOOTH BUCKET BLUNT 3	REPLACE HOLDER + RELAY WORKLAMP 1K13, UKUR KEAUSAN KUKU BUCKET (MASIH STANDARD)
EXCT62017	9/2/2025	MTC Unschedule	BOOM JAMED / LOKASI PONTER /HM 23888.1	REPAIR CONECTOR SENSOR PRESSURE BOOM
EXCT62012	9/2/2025	MTC Unschedule	CANT START / LOKASI SUMP T300 /HM 2291	TRS CANT START,REPAIR HARNESS ECM,REPLACE RELAY PTO,REPAIR HARNES PRESURE SWITCH PTO,GROUN TES
EXCT62019	9/1/2025	MTC Unschedule	CANT START / LOKASI JINMY /HM 22532.2	JUMPER BATTERY BOOSTER , TEST AUTOLUBE
EXCT62010	9/1/2025	MTC Unschedule	CANT START / LOKASI JALAN MC LARENS /H	CHECK STARTING SWITCH
EXCT62019	9/1/2025	MTC Unschedule	CANT START	CHECK UNIT CAN'T START, CHECK ALTERNATOR (OK), CHECK STARTING MOTOR (OK), JUMPER BATTERY
EXCT62010	8/31/2025	MTC Unschedule	LAMPU KERJA MATI / LOKASI JLN MECLERE	REPLACE HOLDER RELAY WORKLAMP 2PCS. CEK OLI OLI
EXCT62015	8/30/2025	MTC Unschedule	CANT START / LOKASI ASTIN /HM 37016.2	REPOSISI AREA GANTI BATTERY , * REPLACE BATTERY 6PCS, * REGASKET LUB TURBO LH & COMPLETED BOLT, * TEST
EXCT62019	8/30/2025	MTC Unschedule	CANT START / LOKASI DIJLAN JIMNY /HM 22	RESET BATTERY, CHECK LEAKING OIL TRAVEL MOTOR LH, OPEN COVER TRAVEL MOTOR LH, RETORQ HOSE TRAVEL
EXCT62015	8/30/2025	MTC Unschedule	CANT START / LOKASI ASTIN /HM 37015.8	CEK CAN'T START, REPLACE STARTING MOTOR RH, JUMPER BATERAI , CEK OUTPUT ALTERNATOR , CEK SWING DEFL
EXCT62015	8/29/2025	MTC Unschedule	CANT START	CHECK UNIT CAN'T START, CHECK STARTING MOTOR (STARTING RH FAILED), JUMPER BATTERY
EXCT62019	8/29/2025	MTC Unschedule	CANT START	REPLACE STARTING MOTOR LH

EXCT62019	8/28/2025	MTC Unschedule	LAMPU KERJA UTAMA MATI	MTS LIGHT OFF, RESET FUSE, CHECK LINE SHORTING, GROUND TES
EXCT62018	8/21/2025	MTC Unschedule	LAMPU KERJA MATI / LOKASI JALAN EXPANDE	CHECK LAMP
EXCT62017	8/21/2025	MTC Unschedule	BUCKET ENGELOCK & CANT SWING / LOKASI J	CHECK SWING MALFUNCTION (CANT SWING), CHECK BUCKET NGELOCK, CLEANING SCREEN FILTER, CHECK RESISTANT
EXCT62010	8/21/2025	MTC Unschedule	CANT RUNNIG / LOKASI JALAN MCLAREN /HM	CEK ENGINE CANT RUN ( DROP VOLTAGE 13V ), JUMPER BATREI
EXCT62018	8/19/2025	MTC Unschedule	CANT START	BOOSTER BATTERY, RESET BATTERY, REMOVE WIRING EXTRA FAN(ON TERUS) , NOTED: OPPORTUNITY REPLACE SENSO
EXCT62012	8/18/2025	MTC Unschedule	LOW POWER	T/S LOW POWER (OVER HEAT HYD), REPAIR HARNES SELENOID CIRCULATING PUMP, GROUND TEST + FINAL CHEC
EXCT62012	8/17/2025	MTC Unschedule	CANT START / LOKASI JL KATANA T300/ H	RESET BATTERY
EXCT62018	8/16/2025	MTC Unschedule	ARM & BOOM LOYO / LOKASI MCLAREN /HM 23	REPAIR HARNESS PUMP 5, GROUND TEST
EXCT62014	8/15/2025	MTC Unschedule	CANT SWING / LOKASI ASTIN /HM 35858.7	CHECK SOLENOID SWING PARKING BRAKE, REPLACE SOLENOID ( SHORT )
EXCT62008	8/13/2025	Radio	PERBAIKAN RADIO / LOKASI JALAN NISSAN	RESETTING RADIO, REPLACE PTT, CEK ANTENNA OK, CEK MODULASI OK, CEK SWR OK
EXCT62008	8/13/2025	MTC Unschedule	LAMPU KERJA MATI SEMUA / LOKASI JALAN N	REPLACE HOLDER, RELAY WORK LAMP, GROUND TEST
EXCT62012	8/13/2025	MTC Unschedule	LAMPU KERJA MATI / LOKASI SUMP T300 AR	REPLACE RELAY HOLDER 1K13
EXCT62014	8/11/2025	MTC Unschedule	LOW POWER ENGINE / LOKASI JALAN ASTIN2	CEK HYD LOW POWER,CLEAN SENSOR PILOT 90 BAR,TAKE SOS ENGINE,TAKE MP FINAL DRIVE RH LH,GROUND TEST
EXCT62015	8/7/2025	MTC Unschedule	LOW POWER / LOKASI ASTIN /HM 36681.9	REPAIR HARNES SOLENOIT , SWAB SOLENOIT , REPLACE COIL 30 BAR
EXCT62006	8/6/2025	MTC Unschedule	BOOM LOYO / LOKASI JLN TERIOS /HM 36474	CLEAN UP CONECTOR HARNES SENSOR BOOM UP, CHECK ALL OIL HYD, REPAIR HARNES PRESURE SENSOR BOOM UP,
EXCT62017	8/5/2025	MTC Unschedule	CANT SWING / LOKASI JLN PONTIAC /HM 234	CHECK POWER HARNES TO SENSOR SWING. CLEANING CONECTOR SWING SENSOR. REPAIR HARNES X22. CLEANING CO
EXCT62014	8/4/2025	MTC Unschedule	SENSOR TANGGA TURUNNYA ABNORMAL / LOKASI	CHECK LEADER MALFUNCTION, CHECK SENSOR LEADER, REPLACE COIL CATRIDGE ASSY ( LEAK ), TOP UP OIL H
EXCT62017	8/1/2025	MTC Unschedule	LAMPU KERJA MATI SEMUA / LOKASI EXPANDE	CEK WORK LAMP DEAD,REPAIR WIRING RELAY LAMP 1K13 PIN 4 (PUTUS)
EXCT62018	9/30/2025	MTC Unschedule	CANT RUNNING	CHECK ENGINE CANSTART,CHECK VOLTAGE BATRE ,CHECK STARTING MOTOR ( BROKEN ),REPLACE STARTING LH, CHEC
EXCT62011	9/28/2025	MTC Unschedule	LOW POWER / LOKASI JALAN IRIAN /HM 352	WASHING RADIATOR & OIL COOLER, SWAB SOLENOID ASSY STICK RE, GROUND TEST
EXCT62006	9/28/2025	MTC Unschedule	LOW POWER & TRACK LH JAMMED / LOKASI JA	CEK REST COIL MP 4, REPAIR HARNESS COIL MP 4, GROUND TEST INSYAALLAH AMAN
EXCT62012	9/23/2025	MTC Unschedule	LOW POWER ENGINE	REPAIR CONECTOR X22, TEST PERFORMANCE (OK), DAILY CHECK, ADD OIL HYD
EXCT62006	9/9/2025	MTC Unschedule	LOW POWER DAN TARCK TIDAK MAU GERAK / L	CEK FOULD CODE(TIDAK ADA), CHECK PRESSURE SERVO 35 BAR(TERBACA 1 BAR), CHECK AND REPAIR HARNES SERV
EXCT62010	8/22/2025	MTC Unschedule	LOW POWER BOOM / LOKASI MCLAREN /HM 337	CHECK UNIT CAN'T START, CLEANING AIR CLEANER, BLEEDING FUEL, REPLACE SOLENOID 35 BAR, REPAIR HARNES
EXCT62012	8/22/2025	MTC Unschedule	LOW POWER ENGINE / LOKASI JL.MASERATI	RAPLACE FUEL FILTER, REPAIR HARNES ECM
EXCT62019	8/21/2025	MTC Unschedule	BREAK DOWN ( ENGINE SHUT DOWN) / LOKASI	CHECK ENGINE SHUTDOWN, ADD COOLANT, REPLACE SELENOID 35 BAR, GROUNDTEST
EXCT62010	8/15/2025	MTC Unschedule	TRACK LH LEPAS / LOKASI PS LEHMANS /HM	JUMPER BATTERY DROP, RELEASE TRACK TENSION, INSTALL TRACK, ADD OIL HYD, GROUND TEST
EXCT62012	8/25/2025	MTC Unschedule	MACHINE GEN STARTED A DELAY: COMPONENT R	REPAIR PIN CONECTOR X22,REPAIR ADAPTOR REMOTE ACTUATOR CABIN.,ADJUST PRESSURE FSS,INSPECT LEAKING ALL POINTS.
EXCT62010	9/30/2025	MTC Unschedule	BUCKET NGELOCK	TRS BUCKET LOCK,REPLACE PRESSURE SENSOR, REPLACE SENSOR PROXIMITY,REPAIR HARNESS PROXIMITY,GROUND TE
EXCT62006	9/26/2025	MTC Unschedule	BUCKET LOW POWER, TRACK KIRI NGEJAMED /	_CLEANING CONNECTOR COIL MP 4, _CEK OIL", _GROUND TEST INSYAALLAH AMAN
EXCT62008	9/23/2025	MTC Schedule	SCH FOLLOW UP HYD OVER HEAT	INSTALL FAN BLADE (PINJAM 62015), _CHECK & REPAIR HARNES EXTRA FAN PTO, _INSTALL PTO PUMP (PINJAM N
EXCT62010	9/19/2025	MTC Unschedule	LOW POWER CANT SWING / LOKASI MCLAREN /	TRS LOW HYD
EXCT62006	9/15/2025	MTC Unschedule	UNIT JAMED ( TIDAK BISA GERAK ) / LOKASI	CEK FAULT CODE ( PRESSURE 35 BAR FAULT ),CEK SOLENOID,CLEAN SOLENOID,SWAB SOLENOID,GROUND TEST
EXCT62006	9/10/2025	MTC Unschedule	TRACK LH NGELOCK / LOKASI JL.TERIOS /HM	CEK ERROR , * CEK HARNESS SOL PUMP 3, * CEK RESISTAN COIL PUMP 3 , * TUKAR COIL PUMP 3, * CEK OLI OL
EXCT62006	9/8/2025	MTC Schedule	SCHEDULE FOLLOW UP HYDRAULIC	CHECK FOULD CODE ERROR, CHECK POWER SELENOID TRACK TENSION, REPLACE SELENOID TRACK TENSION, REPAIR
EXCT62008	9/8/2025	MTC Unschedule	HOSE CYLINDER BUCKET BOCOR / LOKASI JAL	REPLACE HOSE BUCKET,REPAIR HARNES EMERGENCY STOP,REPLACE SOLENOID AC ,ADD OIL HYD,GROUN TES

EXCT62019	9/8/2025	MTC Unschedule	MACHINE GEN STARTED A DELAY: HYDRAULIC	ADD OIL HYD 300L,ADD OIL SWING 10L,CEK ALL OIL AMAN
EXCT62006	9/7/2025	MTC Unschedule	ACHETMENT LOW POWER	GREASING MANUAL BUCKET, SWICT SENSOR PRESS BUCKET
EXCT62012	9/4/2025	MTC Unschedule	LOW POWER, PRESSURE POMPALOW, SENSOR PRE	CEK PRESSURE PUMP ( OK ),CEK SICLE TIME ATTCHMENT (OK ),CEK HARNESS MAINPUMP
EXCT62014	9/3/2025	MTC Unschedule	OVERHEAT HYD & LOW POWER / LOKASI ASTIN	REPAIR HARNES PUMP SIRKULATING, REPLACE SLENOIT , CEK REGULATOR (OK), CEK INTERNAL LEAK PUMP SIK
EXCT62014	9/3/2025	MTC Unschedule	OVERHEAT HYD & LOW POWER	REPAIR HARNES PUMP SIRKULATING, REPLACE RELIF 35 BAR, CLEANING SENSOR TEMPERARUR PUMP 3, CHEK AL
EXCT62011	9/3/2025	MTC Schedule	SCH FOLLOW UP HYD OVER HEAT	CHECK ALL SELENOID AT MAINPUMP OK,CHECK PRESSURE SENSOR HPS OK,GROUNDTEST
EXCT62011	8/29/2025	MTC Unschedule	BUCKET, ARM ENGELOCK & OVERHEAT HYDROLIC	ERROR PRESURE SENSOR STICK ARM, RISET CEK CURRENT MP 2 82 MA, CEK PRESSURE MP 1 & 2 , CEK POWER SEL MP 2 3,2 VOLT , CEK HARNESS GROUND
EXCT62014	8/20/2025	MTC Unschedule	SWING BERAT / LOKASI ASTIN /HM 35933	
EXCT62012	8/13/2025	MTC Unschedule	ENGINE SHUTDOWN & OLI HYDROLIC LOW / LOK	ADD OIL HYDRAULIC,REPAIR HARNESS X22
EXCT62012	8/13/2025	MTC Unschedule	ENGINE SHUTDWON, OLI HYDROLIC DI BAWAH L	REPAIR HARNESS ECM, ADD OIL HYD 430 LITER,CEK ALL OIL OK
EXCT62015	8/13/2025	MTC Unschedule	LOW POWER ENGINE (SERVO UNDER 80BAR) / L	CEK LOW POWER ,REPLACE COIL SERVO ,ADD OIL HYD,OIL PTO,GROUND TEST INSYAALLAH AMAN
EXCT62011	8/8/2025	MTC Unschedule	OLI HYDROLIC DI BAWAH LOW & ENGINE SHUTD	ADD OIL HYD 498 L, ADD COOLANT , ADD OIL OMALA 9 L, CHECK OIL LEVEL ENGINE
EXCT62017	8/7/2025	MTC Unschedule	ATTACKMENT ENGELOCK / LOKASI JALAN PONT	CEK ATTACHMENT LOCK,REPLACE COIL SERVO,GROUND TEST INSYAALLAH AMAN
EXCT62018	8/5/2025	MTC Unschedule	ENGINE SHUTDOWN & OLI HYDROLIK HABIS / L	REPLACE HOSE DELIVERY PUMP 1, ADD OIL HYD 529 LITER, WASHING, FINAL CEK & GROUNDTEST
EXCT62011	8/3/2025	MTC Unschedule	ENGINE SHUTDOWN ATTACKMENT	ADD OIL HYD 507 LTR
EXCT62012	8/3/2025	MTC Unschedule	ENGELOCK & OPERATOR SEAT ENGE	CEK PRSURE PILOT BY MONITOR,CEK ATTACMENT NOT FUNGSION,REPLACE COIL PUMP PILOT,CHECK ALL OIL
EXCT62012	9/28/2025	MTC Unschedule	OVERHEAT PTO & LOW POWER / LOKASI JALAN	CHECK PTO OVERHEAT ,CHECK EXTRA FAN PTO OK,LEVELING OIL PTO,WASHING,ADD OIL HYD
EXCT62018	8/17/2025	MTC Unschedule	TRACK KANAN TIDAK BISA MUTAR	CEK PRESSURE PUMP 3 , * CEK CURRENT PUMP 3 , * CEK HARNESS SOL PUMP 3 , * REHARNESS SOL PUMP 3 , * FIN

### Lampiran 3 *Form Pengajuan Judul Tugas Akhir*

FRM-TA1

**POLITEKNIK NEGERI BALIKPAPAN**  
**JURUSAN TEKNIK MESIN – PROGRAM STUDI ALAT BERAT**  
**FORMULIR PENGAJUAN JUDUL TUGAS AKHIR**

Nama Mahasiswa : Meskya Piara Sadham  
NIM : 912024097  
Kelas : Teknik Mesin Alat Berat  
NO. HP : 082255403215

**Judul TA yang diusulkan**

ANALISA PENYEBAB KERUSAKAN SYSTEM ELECTRICAL PADA UNIT EXCAVATOR CAT 6020

**Kata Kunci :**

*Wiring Harness, System Electrical, Excavator CAT 6020.*

**Objek Penelitian**

Objek yang diambil dari penelitian ini adalah kondisi wiring harness dan konektor wiring harness excavator CAT 6020.

**Permasalahan :**

- Apa penyebab kerusakan sistem elektrikal terhadap unit excavator CAT 6020?
- Bagaimana melakukan pencegahan terhadap kerusakan elektrikal?

**Metode Penyelesaian Masalah :**

- Melalui pengumpulan riwayat perbaikan dan *troubleshooting*, serta melakukan observasi langsung ke unit CAT 6020.
- Menerapkan metode analisis *trend*, analisis visual serta menerapkan *8 step troubleshooting*.
- Memberikan solusi atau rekomendasi perbaikan dan pencegahan yang konkret berdasarkan hasil analisis untuk mengurangi kerusakan di masa mendatang.

Tanjung Tabalong, 20 Agustus 2025

Mengetahui dan Menyetujui,  
Pembimbing I



Subur Mulyanto, S.Pd., M.T.  
NIP/NIDN: 0006028206

Mahasiswa Pengusul



Meskya Piara Sadham  
NIM: 912024097



## Lampiran 5 Laporan Bimbingan Tugas Akhir

1/22/26, 11:03 AM

Laporan Bimbingan Skripsi



### KEMENTERIAN PENDIDIKAN TINGGI, SAINS, DAN TEKNOLOGI POLITEKNIK NEGERI BALIKPAPAN

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Laman www.polteknika.ac.id Surat Elektronik admin@polteknika.ac.id

#### LAPORAN BIMBINGAN SKRIPSI

NIM : 012024097 Nama : MESKYA PIARA SADHAM  
Judul Skripsi : ANALISA PENYEBAB KERUSAKAN SYSTEM ELECTRICAL PADA UNIT EXCAVATOR CAT 6020 Status Skripsi : A  
Program Studi : Alat Berat Pembimbing : 008025206 - SUBUR MULYANTO, S.Pd., M.T.  
0031017601 - PATRIA RAHMAWATI, S.Psi., M.MPd

No.	Pembimbing	Tanggal	Topik	Pembahasan
1	0031017601 - PATRIA RAHMAWATI, S.Psi., M.MPd	16 Desember 2025	konsultasi penulisan isi dari bab 4	pembahasan terkait revisi pada format paragraf pada isi bab dan sub bab agar disesuaikan sesuai kaidah penulisan yang benar.
2	008025206 - SUBUR MULYANTO, S.Pd., M.T.	16 Desember 2025	konsultasi isi bab 4 terkait hasil penelitian dan pembahasan	pembahasan mengenai data data yang perlu dilengkapi untuk mempermudah analisis pada kerusakan unit excavator cat 6020.
3	0031017601 - PATRIA RAHMAWATI, S.Psi., M.MPd	22 Desember 2025	konsultasi perbaikan penulisan pada penempatan gambar isi dari bab 4	pembahasan dari revisi pada penempatan gambar dari isi bab 4.
4	008025206 - SUBUR MULYANTO, S.Pd., M.T.	18 Desember 2025	konsultasi hasil analisa objek yang diteliti, cari referensi pendukung penyebab kerusakan elektrikl pada objek yang diteliti.	Pembahasan hasil analisa objek yang diteliti, cari referensi pendukung penyebab kerusakan elektrikl pada objek yang diteliti.
5	008025206 - SUBUR MULYANTO, S.Pd., M.T.	23 Desember 2025	konsultasi hasil analisa dari isi bab 4	pembahasan terkait isi dari bab 4 khususnya pada hasil analisa untuk memberikan rekomendasi yang sesuai dengan permasalahan yang terjadi dipangan.
6	0031017601 - PATRIA RAHMAWATI, S.Psi., M.MPd	23 Desember 2025	konsultasi hasil revisi penulisan daftar isi	pembahasan hasil dan revisi penulisan daftar isi : cara menapikan daftar isi agar terlihat lebih rapi.
7	0031017601 - PATRIA RAHMAWATI, S.Psi., M.MPd	6 Januari 2026	konsultasi pertakan penulisan abstraksi dan lembar persetujuan	pembahasan perbaikan penulisan abstraksi untuk dformat italic serta perbaikan penulisan pada lembar pengawahan.
8	008025206 - SUBUR MULYANTO, S.Pd., M.T.	6 Januari 2026	konsultasi isi dari abstraksi	pembahasan isi dari abstraksi sudah sesuai, untuk penulisan dalam bahasa Inggris lebih diperhatikan jamak dan tunggalnya.

Balikpapan, 22 Januari 2026  
Keprod Alat Berat

ARYATI MULYAMIN MARAJI, S.Pd., M.T.  
NIP. 199209062022032009

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