

# VOLVO CONSTRUCTION EQUIPMENT MATRIS REPORT

Machine model A40G	SerialNo 341260	Operating Hours 7819.1	Reading Date 7/23/2019
Company name rudd equipment	Dealer rudd	Report Issuer	
Contact name	Technician c miles	Primary Application Earth moving construction	
Site evansville	Workorder	Ground Condition	

MATRIS Reading, Summary / Recommendation

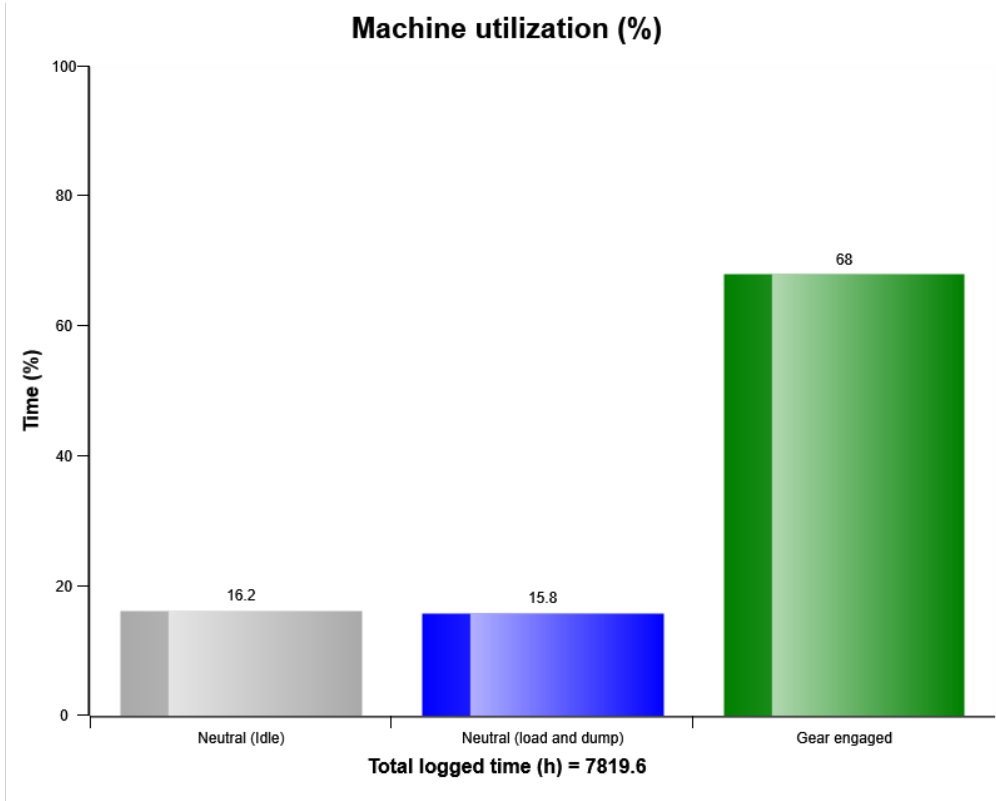


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

Main equipment	Type	Equipment
	Tyre size/class	Sold without tyres
	Body extensions	Not mounted
	Tail-gate	Not mounted
	Extra spillguard	Not mounted
	Wear plates	Not mounted
	Pattern	None



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows a simplified presentation of the machines utilization based on the relation between time in gear and time in neutral. The "Gear engaged " includes both forward and reverse gears.

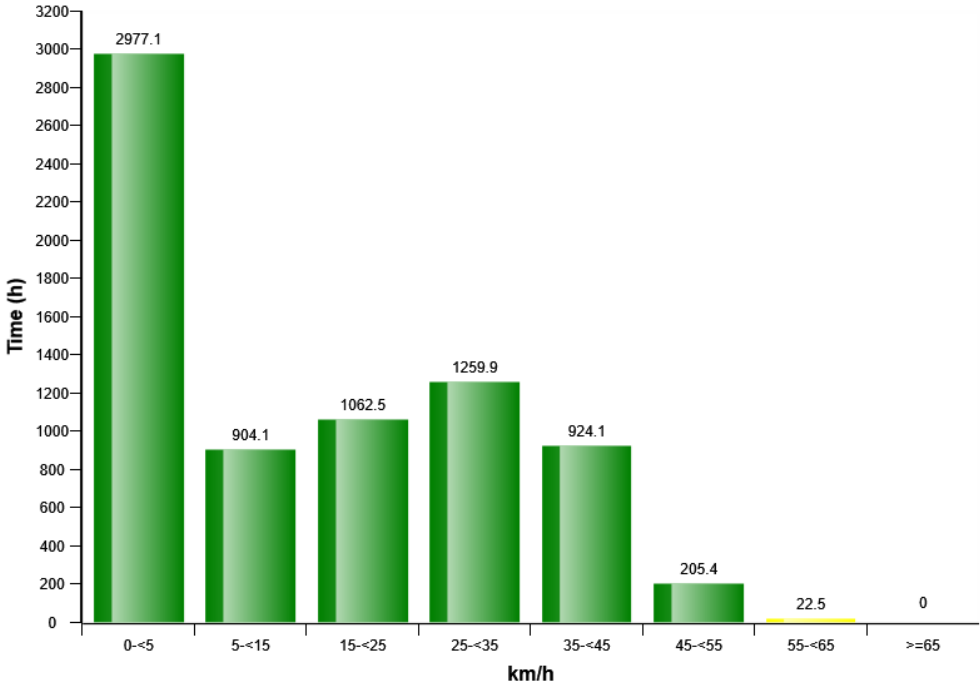
This presentation of the machines utilization can only be seen as a guideline value since a full calculation of the machines utilization is more advanced. E.g. "Neutral" includes time for loading and dumping which should be seen as operating time.

High percentage of neutral time may indicate that the machine is underused due to e.g. under dimensioned loading tool or oversized hauler fleet



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Machine speed, distribution**

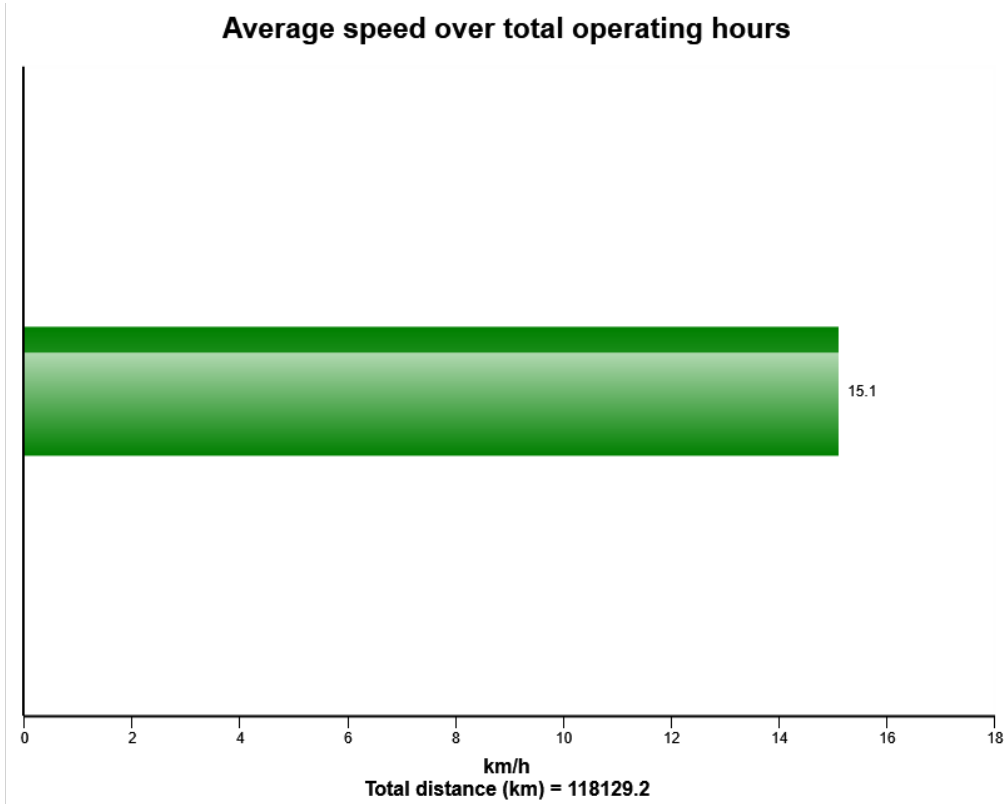


The presentation shows the time in hours in speed-intervals for the vehicle

Note that the interval 0-5 km/h includes machine not in motion. If the machine has been operated above 55 km/h there is a risk of engine over speed.



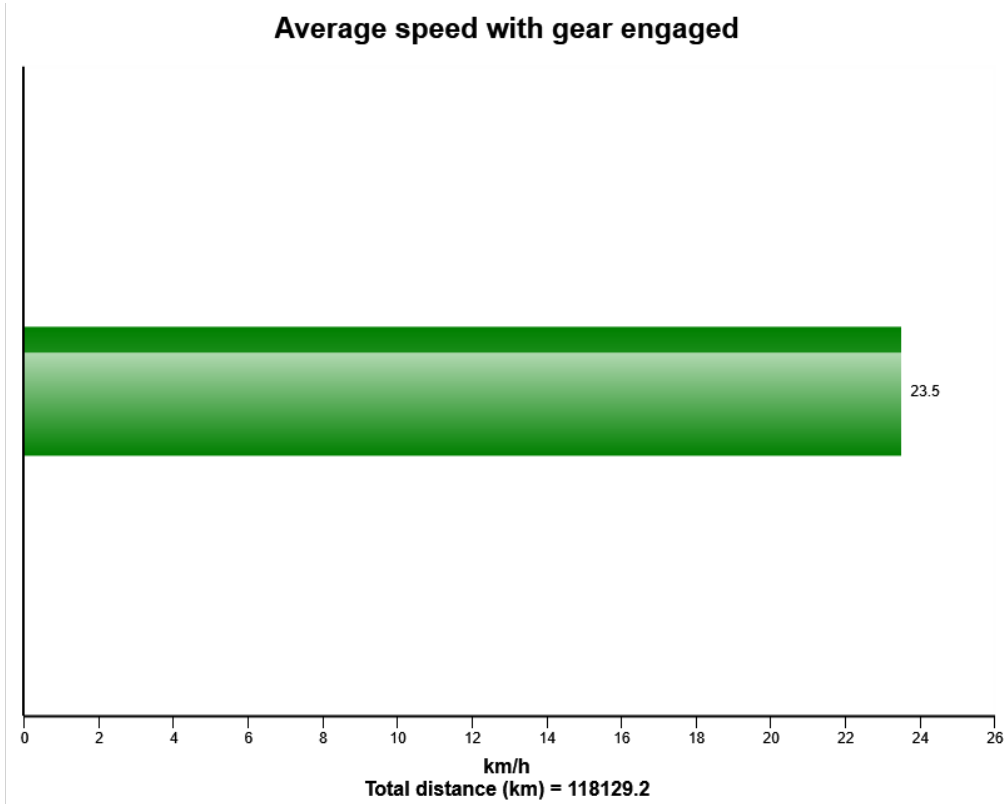
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the machines average speed based on the total operating hours.



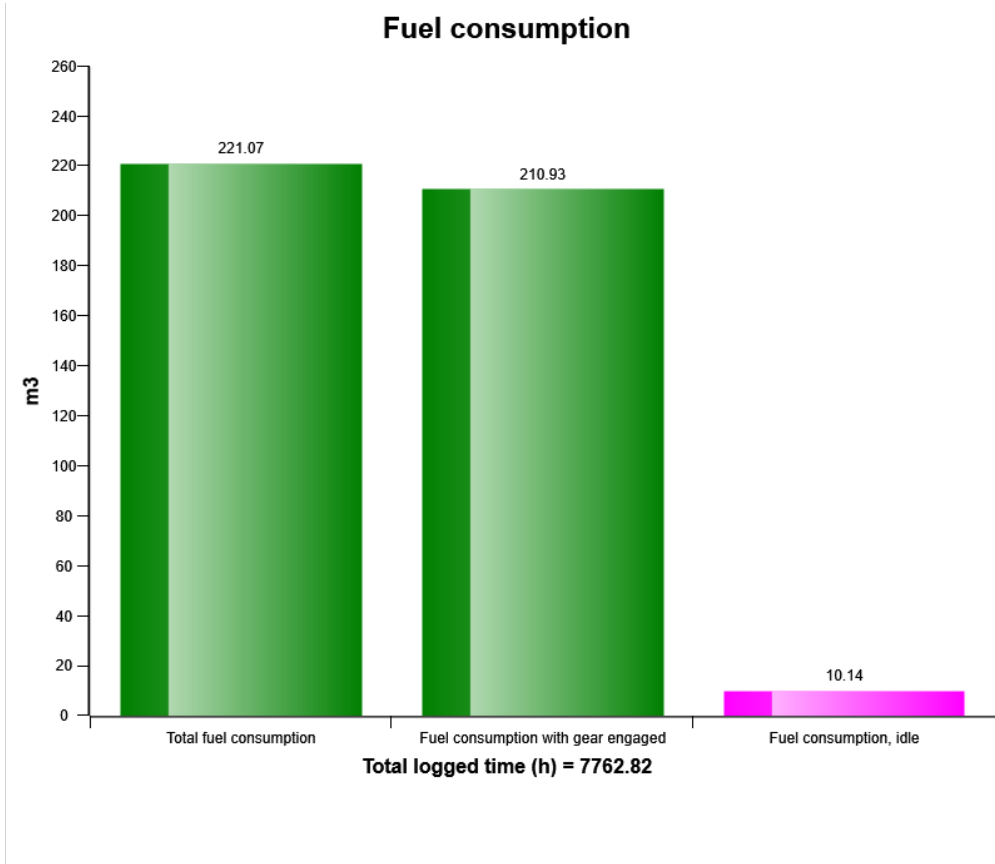
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the machines average speed based on the operating hours with gear engaged.



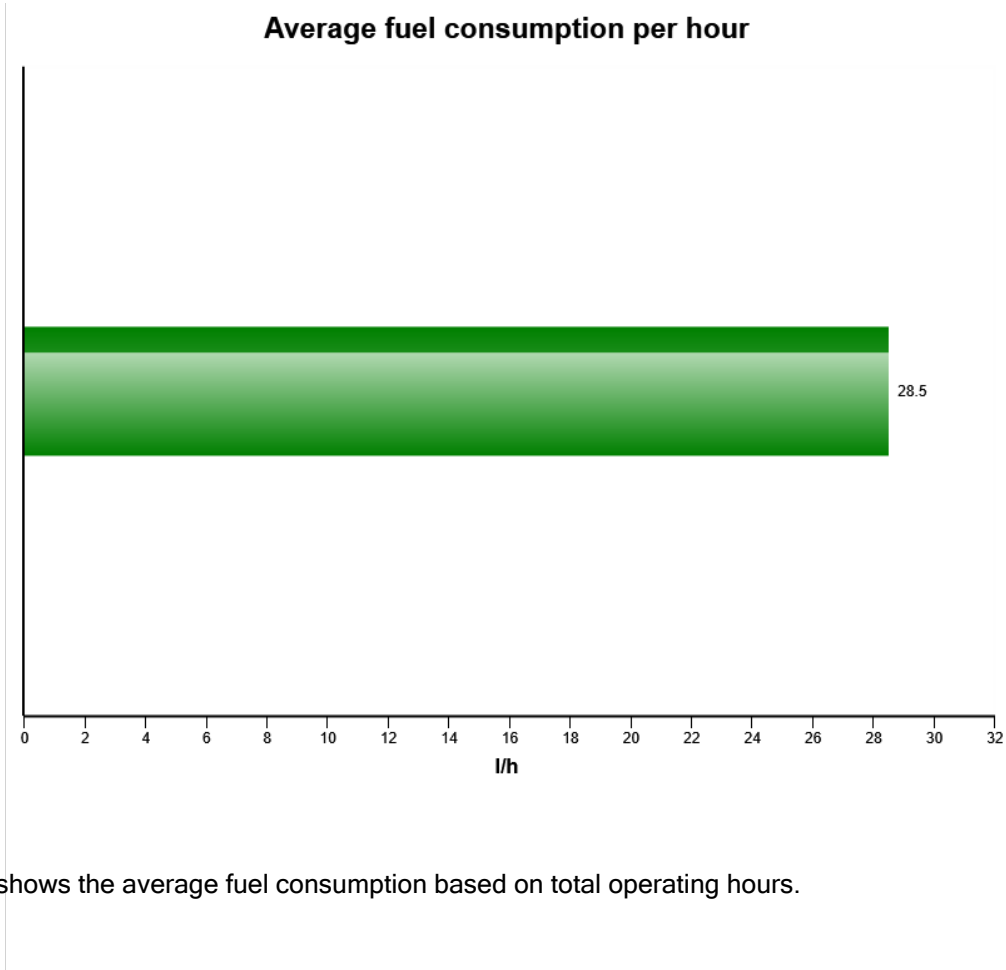
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

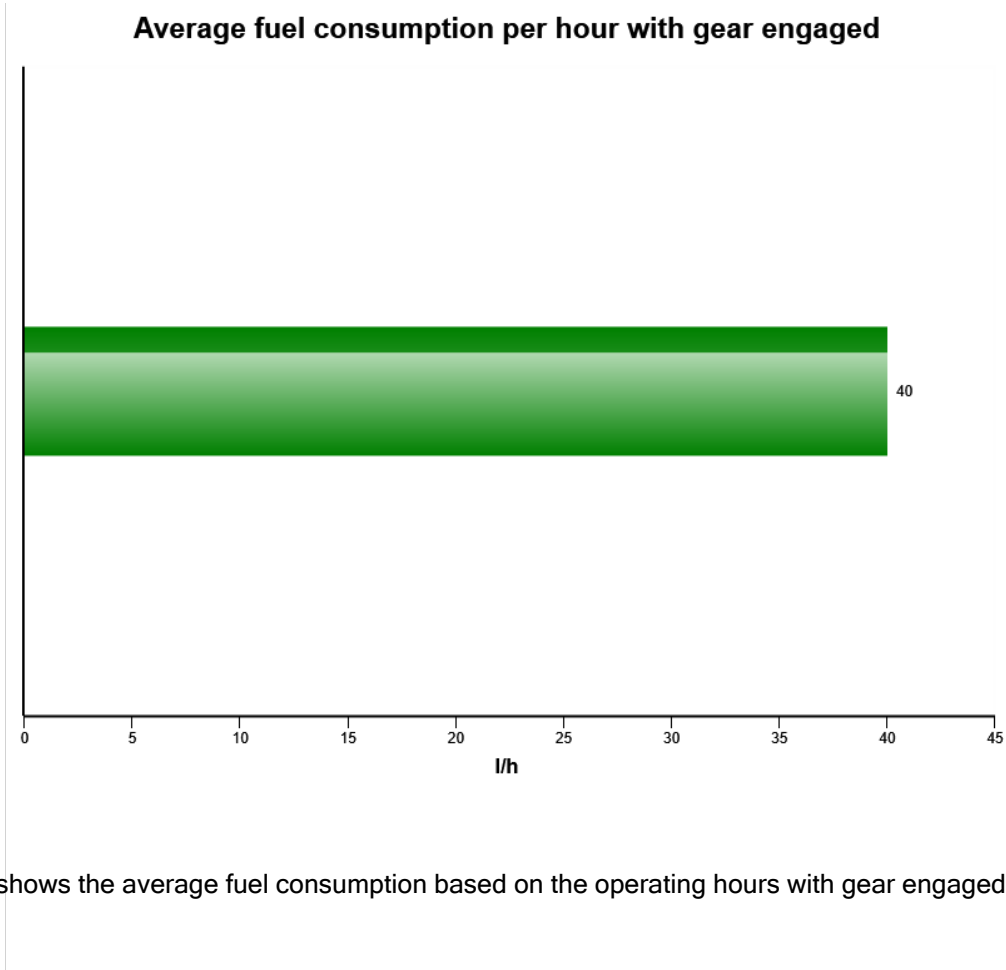


The diagram shows the average fuel consumption based on total operating hours.





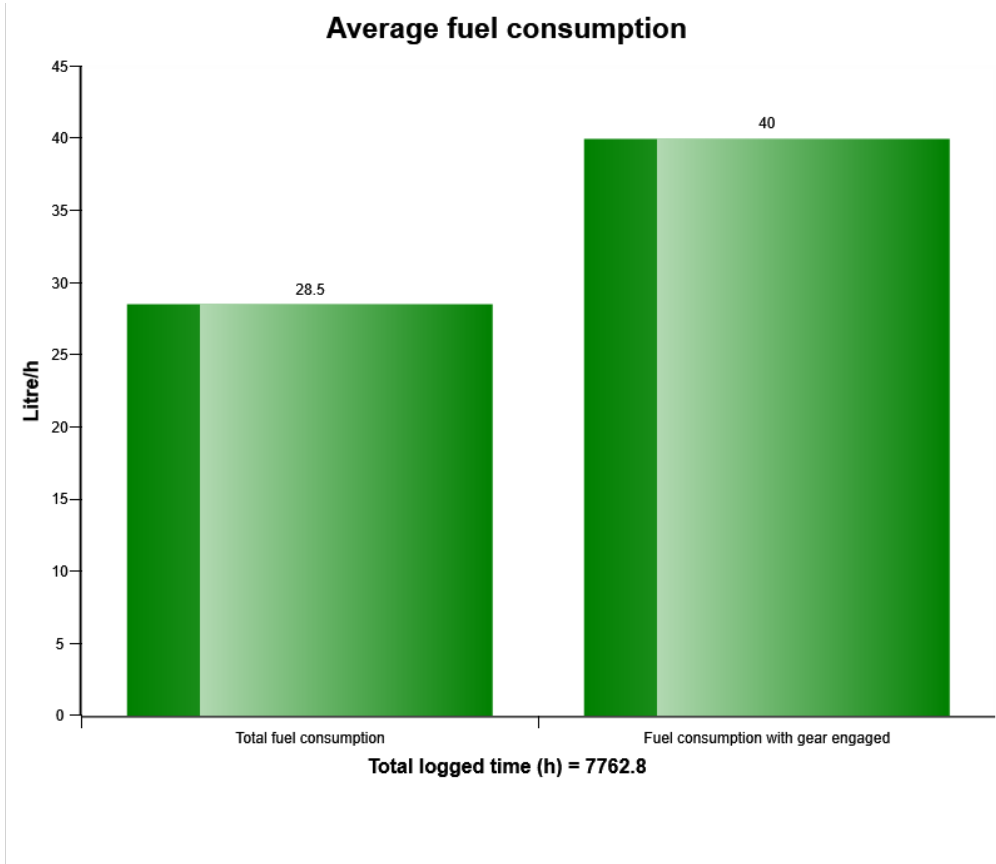
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the average fuel consumption based on the operating hours with gear engaged.



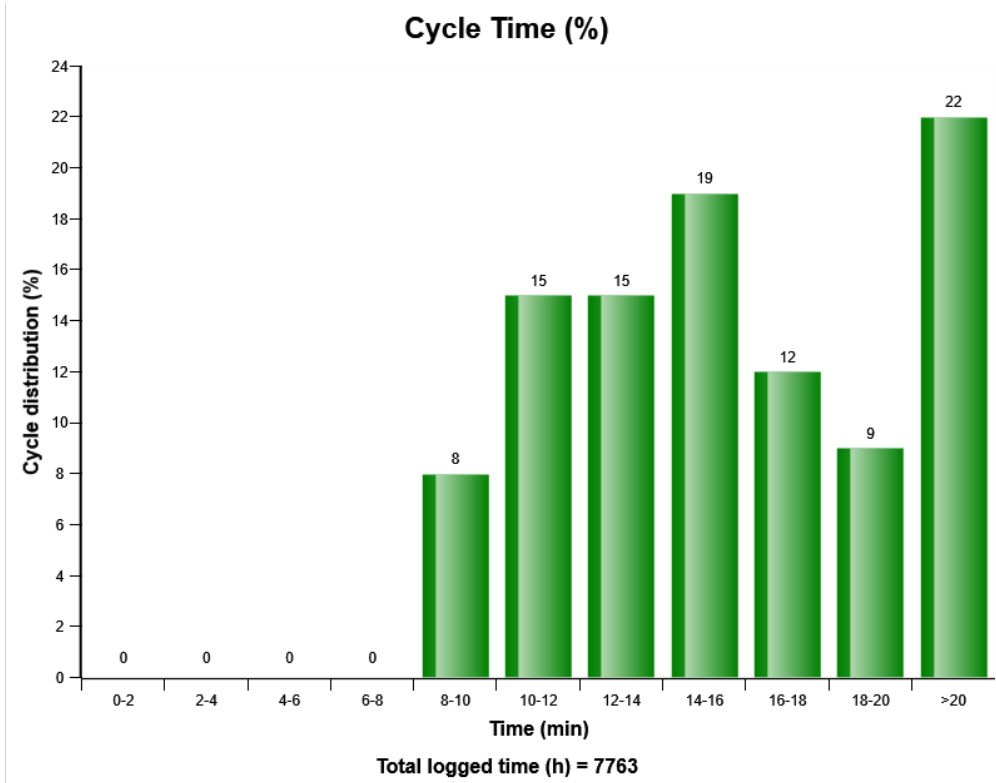
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



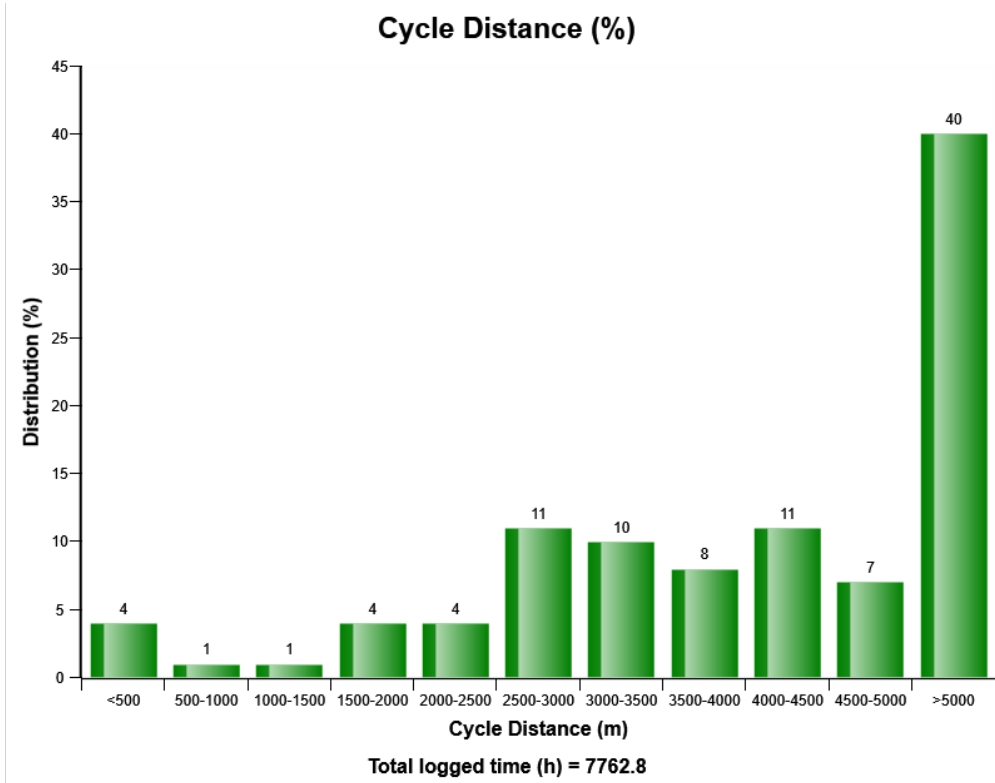
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the distribution of the working cycle time. The time between 2 valid cycle registrations is registered. Time starts from lifting the body.



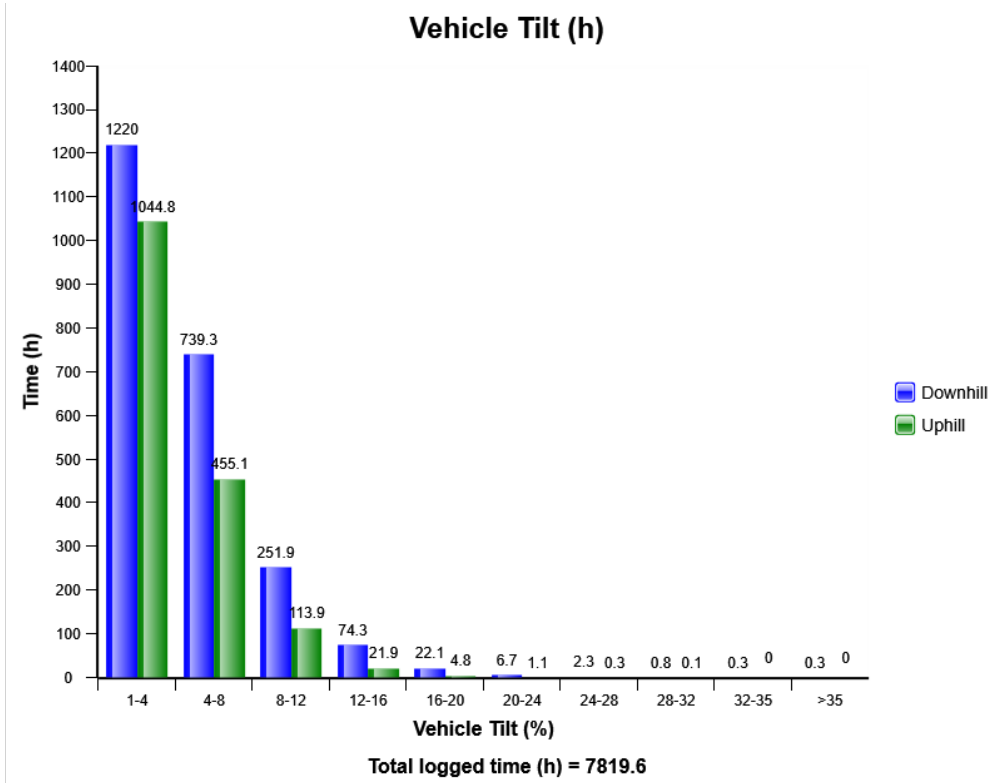
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the distribution of the working cycle distance. The distance driven between 2 valid cycle registrations.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the distribution of the longitudinal tilt in percent (not degrees), the criteria to get registrations is that the vehicle speed exceeds 1km/h (0,62mph) and that the engine is on.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Accumulated performance**  
**Total logged time (h) =**

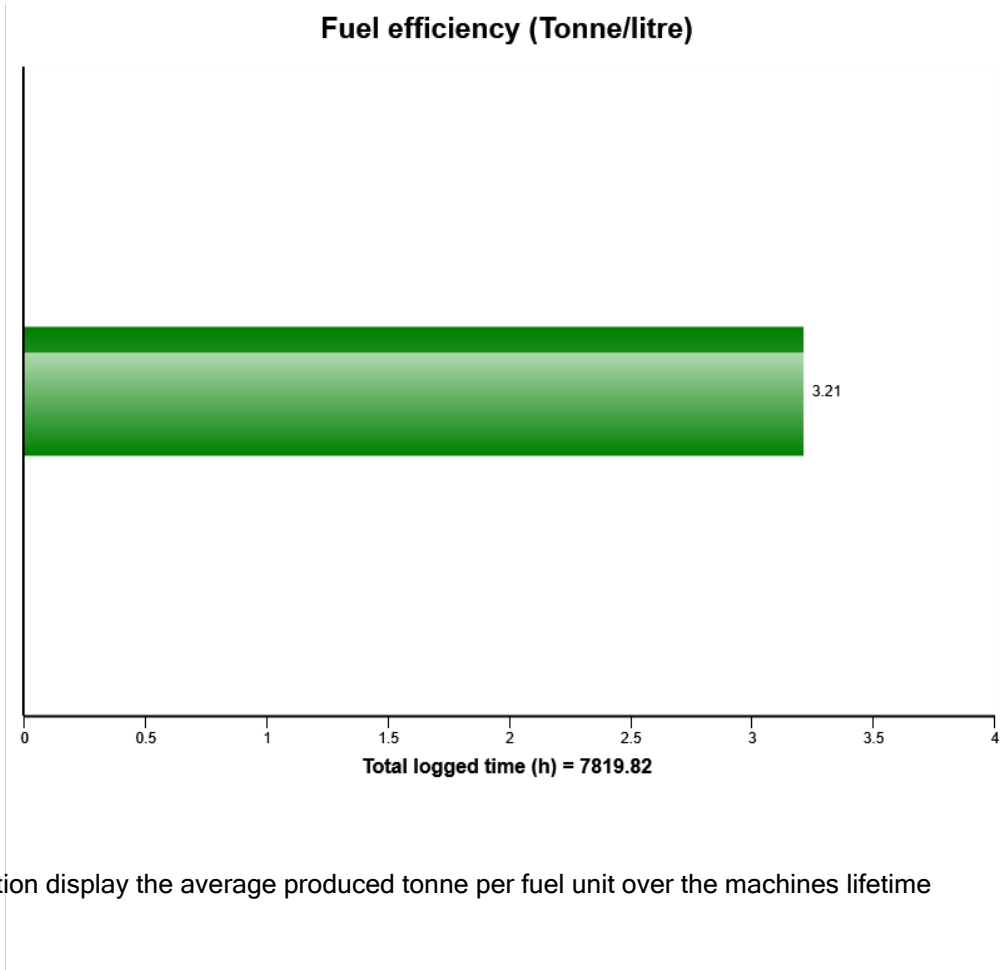
<b>Total logged time (h) =</b>	7819.8
<b>Total fuel consumption</b>	221130.1
<b>Production (tonne)</b>	709332.3
<b>Tonne/h</b>	90.7
<b>Tonne/litre</b>	3.2
<b>Litre/tonne</b>	0.3
<b>Number of cycles</b>	19623
<b>Cycles overloaded (%)</b>	2.6
<b>Load utilisation / cycle (%)</b>	92.7

The table shows the accumulated values for respectively area stated in the table.

Values are saved over the life of the machine only when the engine is running.



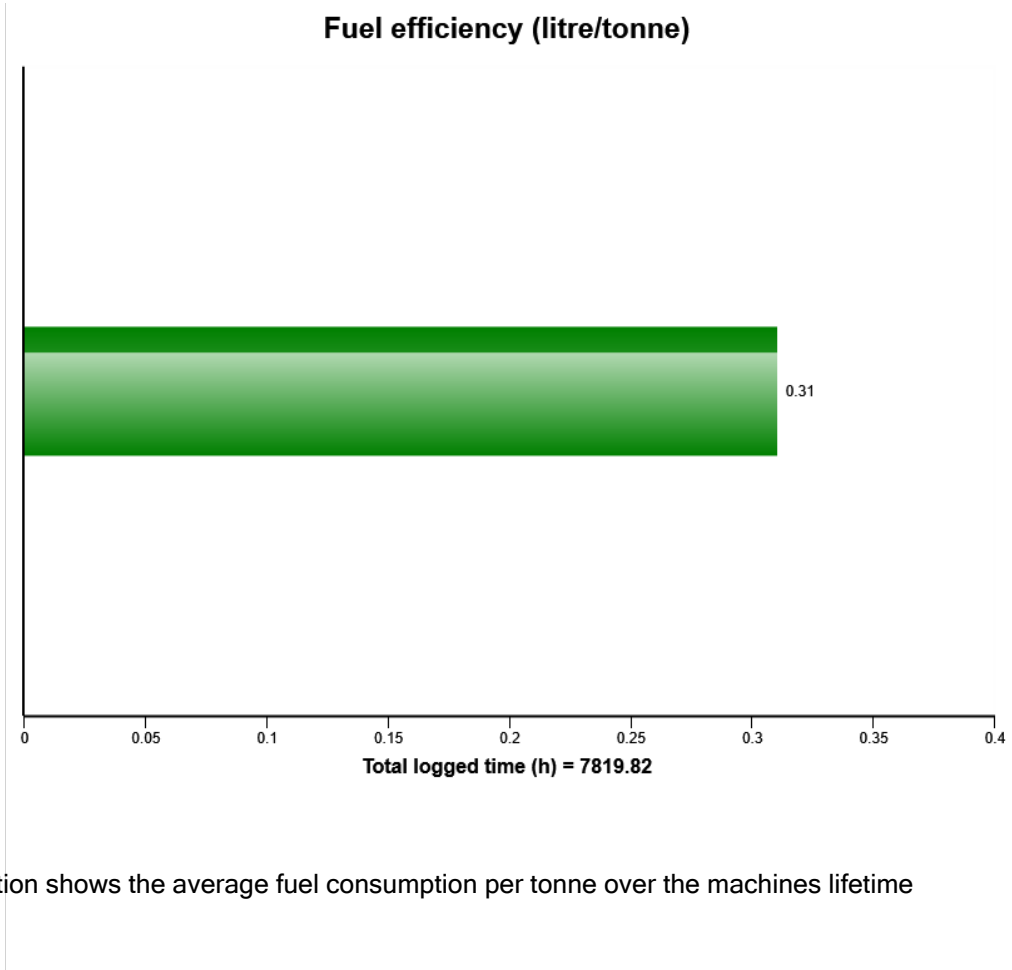
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The presentation display the average produced tonne per fuel unit over the machines lifetime



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

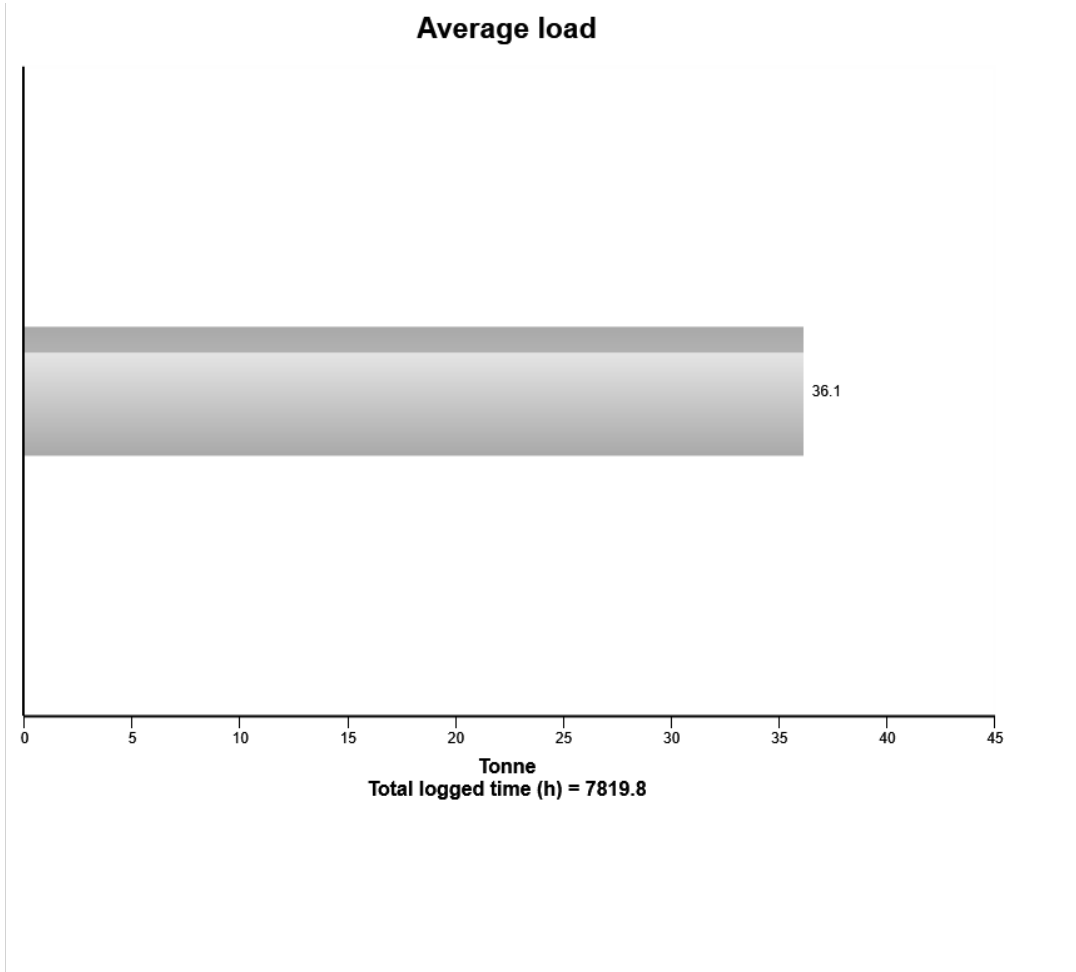


The presentation shows the average fuel consumption per tonne over the machines lifetime

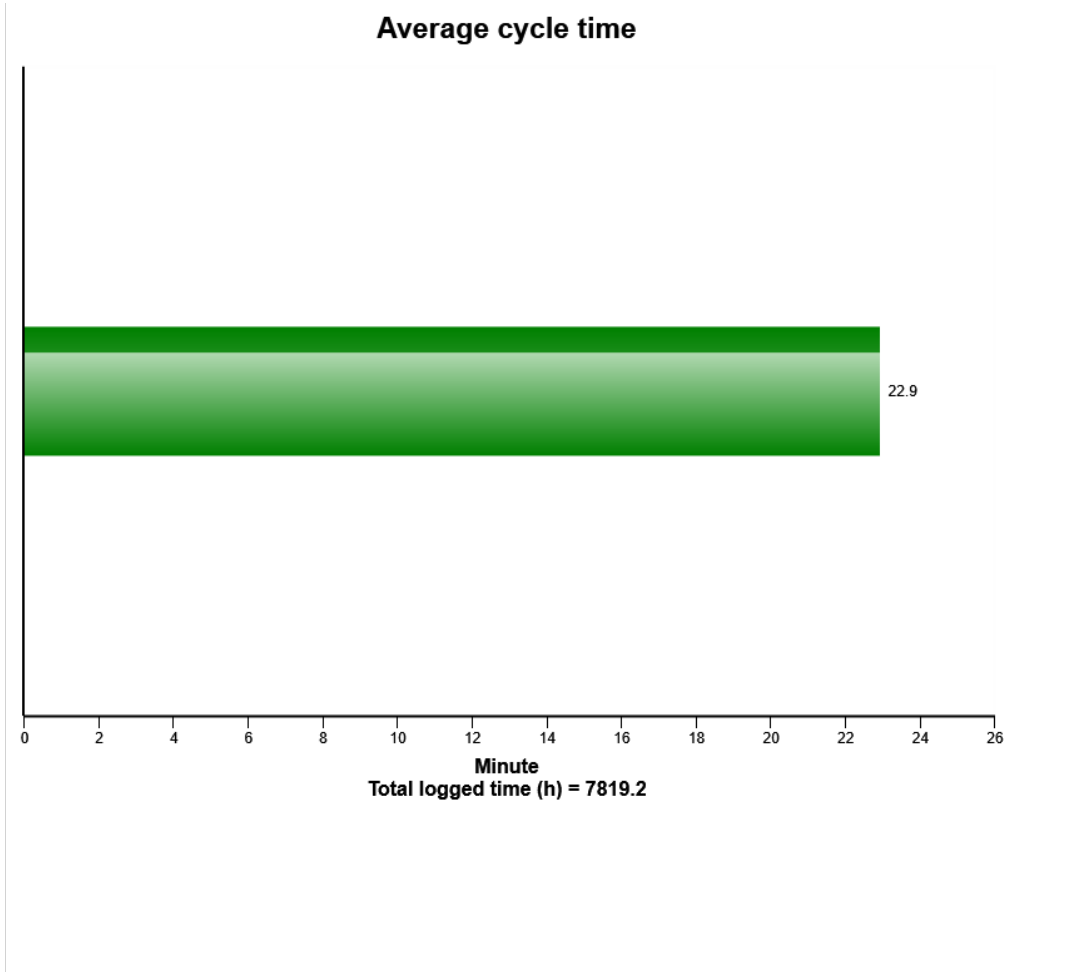




Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

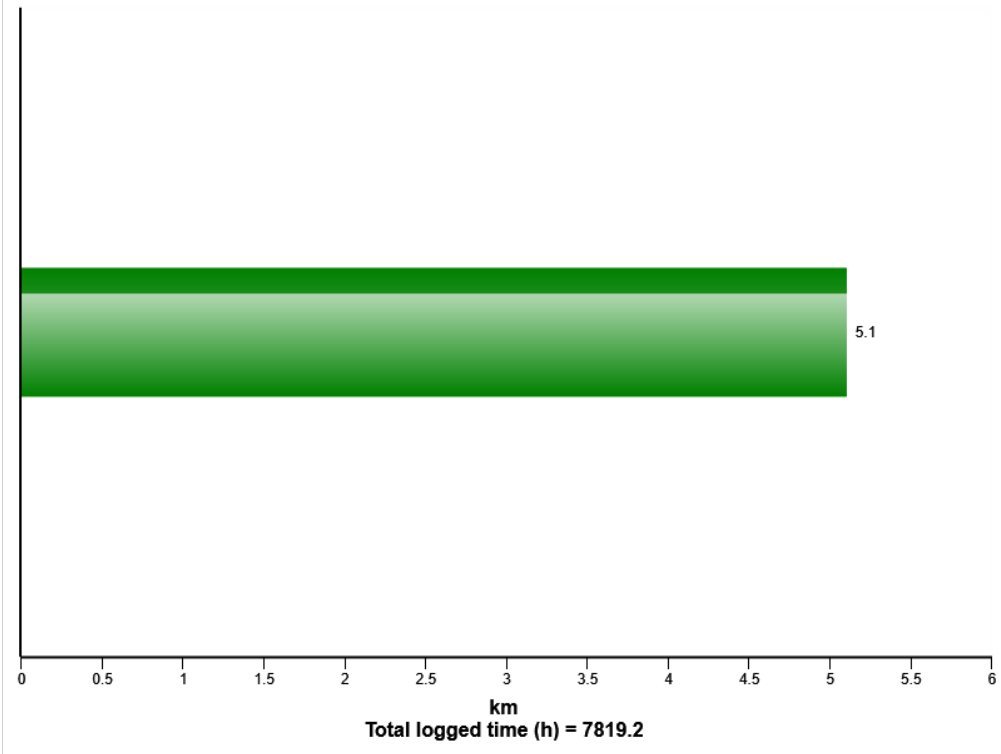


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

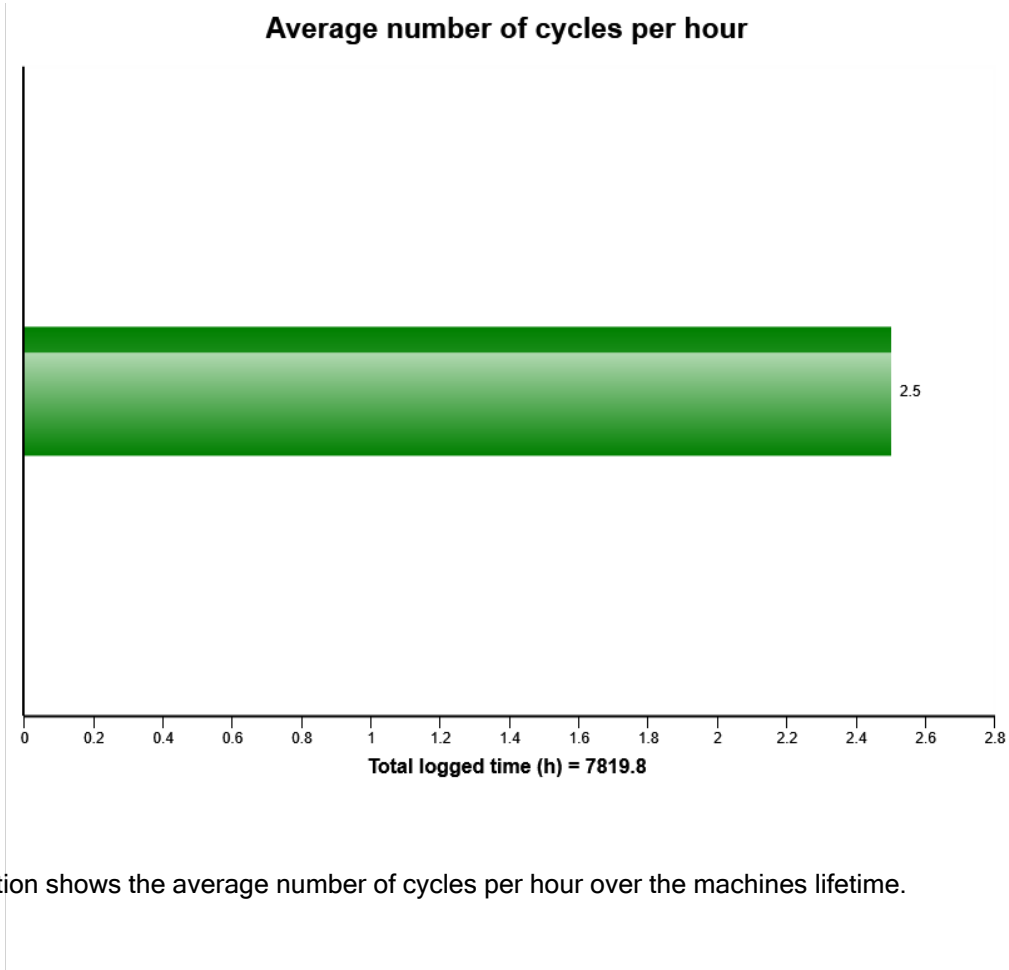


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

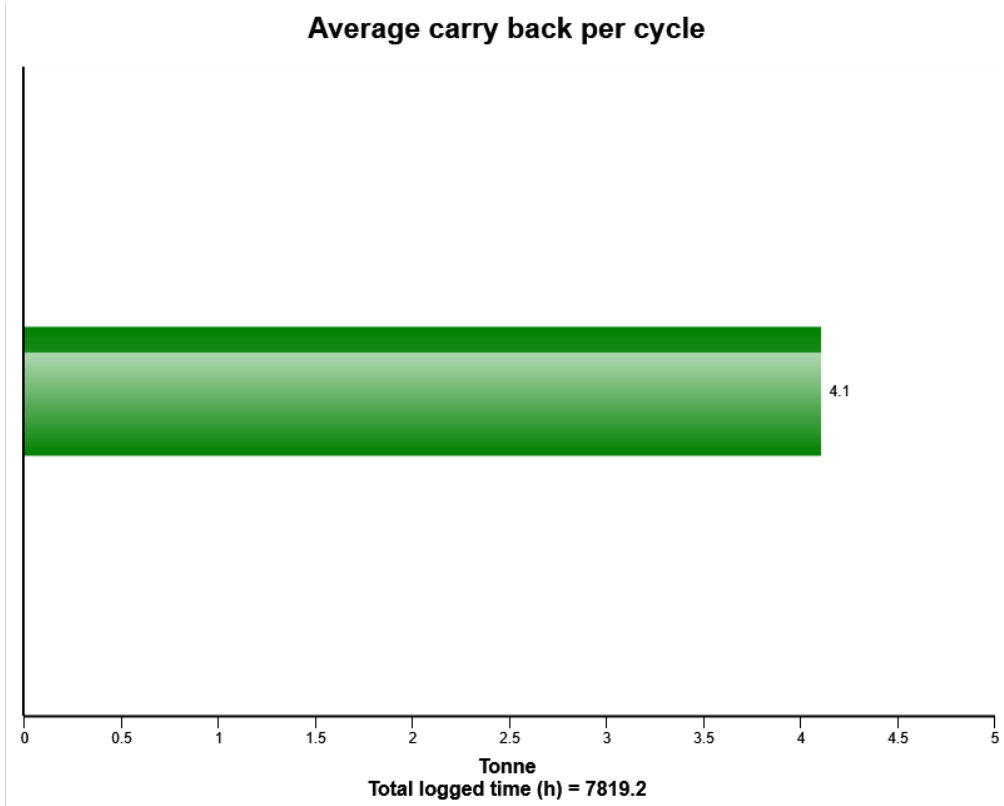
**Average cycle distance**



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



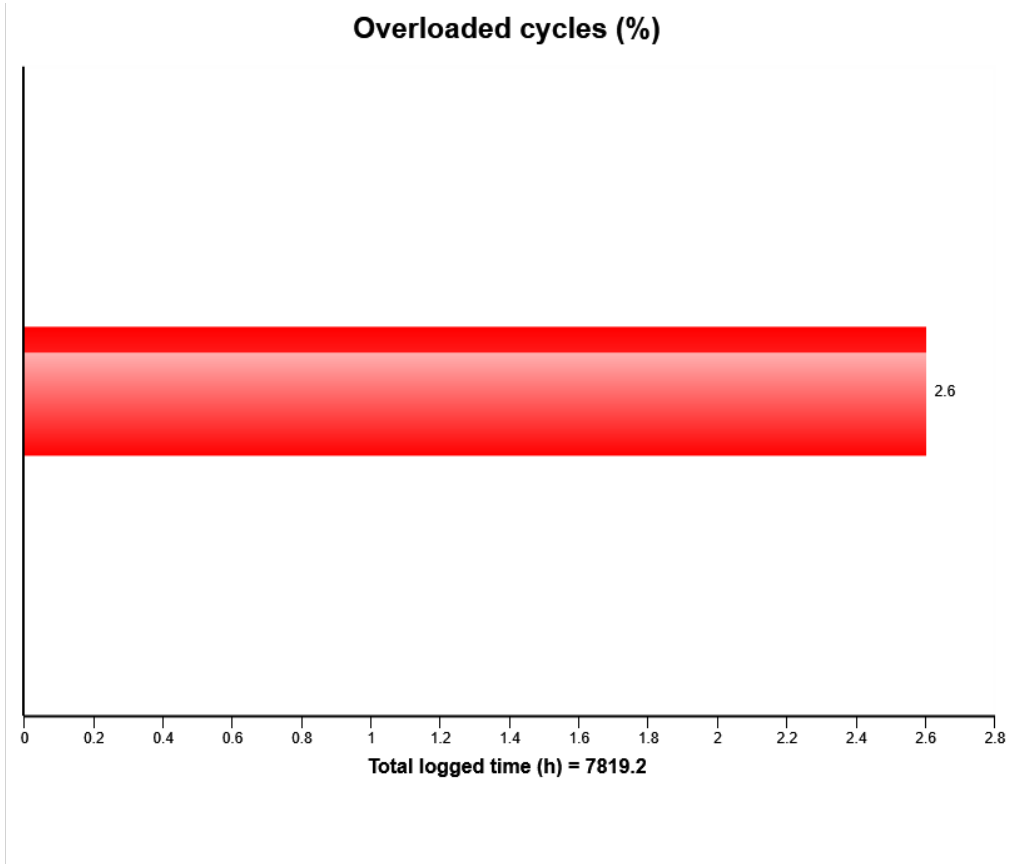
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



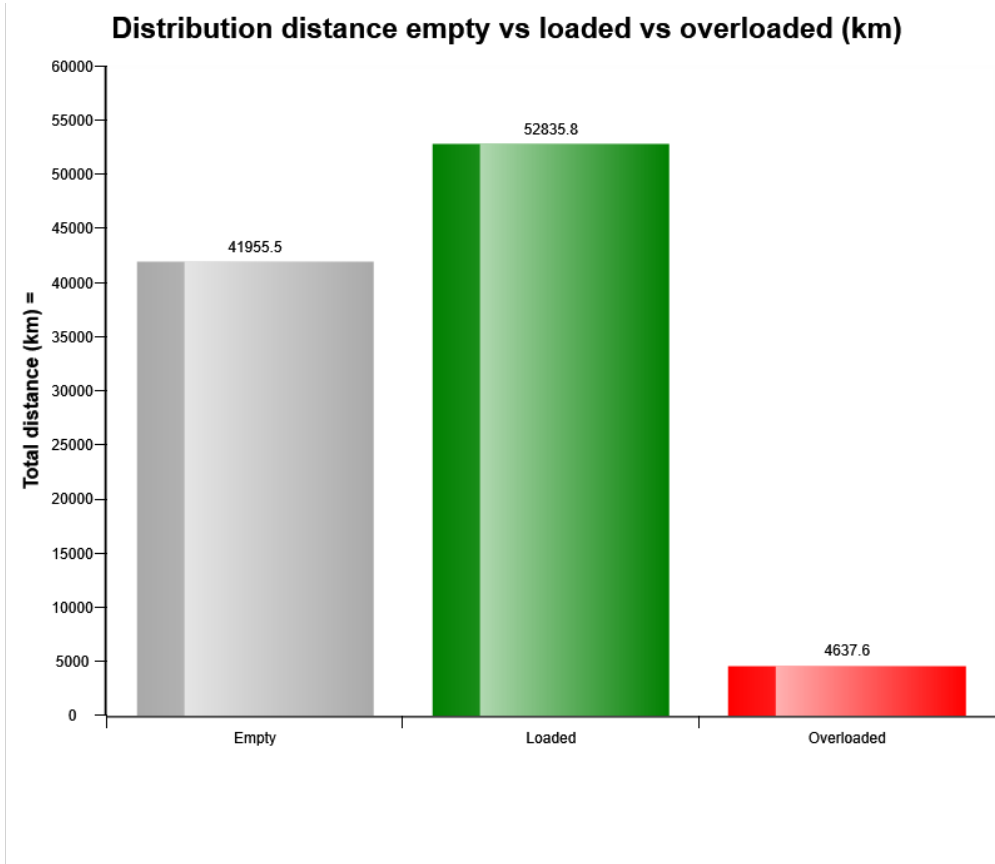
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
The ':' character, hexadecimal value 0x3A, cannot be included in a name. Line 1, position 656.



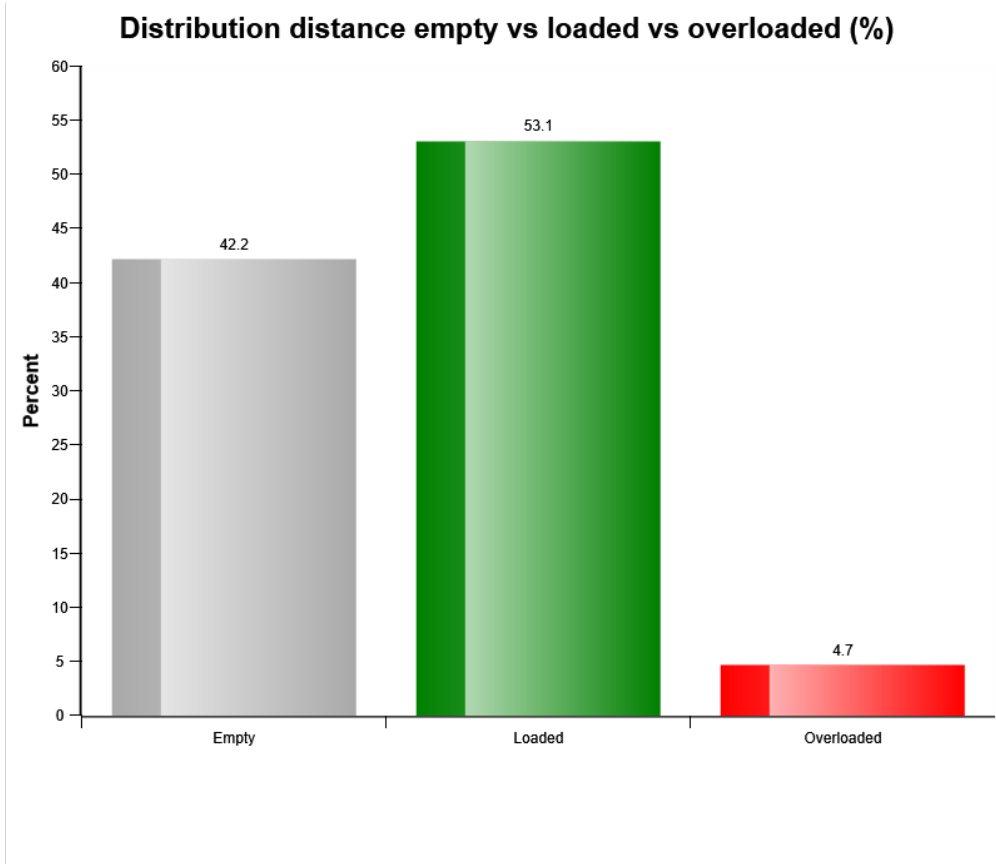
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
The ':' character, hexadecimal value 0x3A, cannot be included in a name. Line 1, position 1402.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

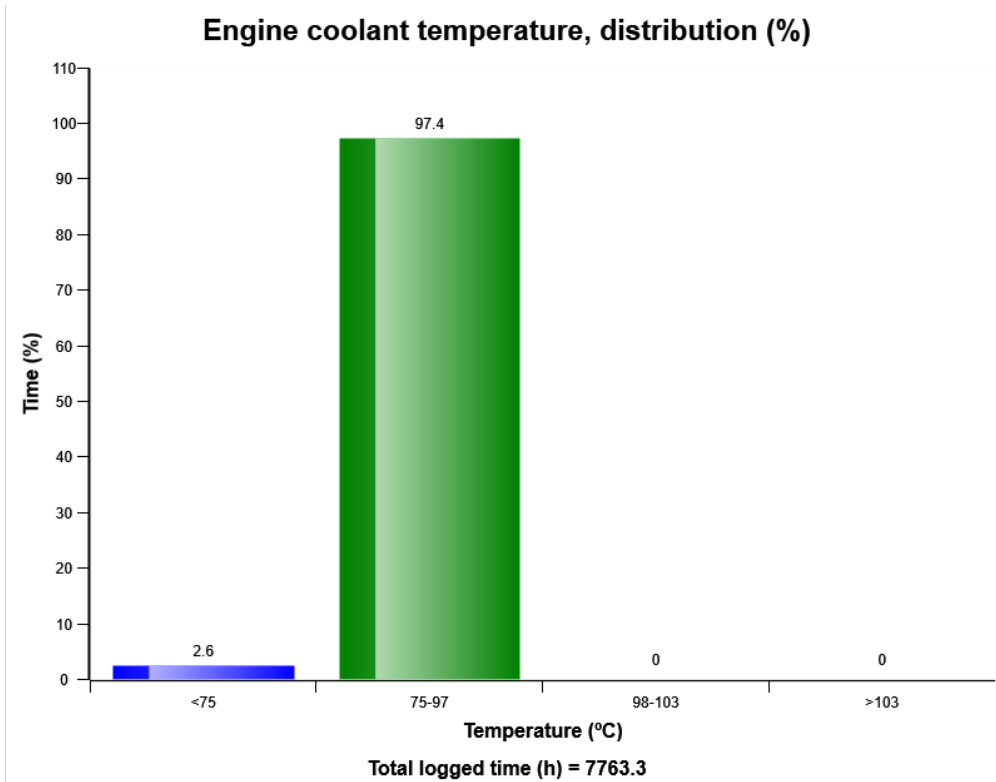


An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
The ':' character, hexadecimal value 0x3A, cannot be included in a name. Line 1, position 1402.





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the time distribution of the temperature, while engine running.

**Explanation:**

Y-axis: Time

X-axis: Temperature distribution in classes.

Blue bar = Warm-up phase.

During the engine warm-up phase, this temperature region is passed.

It is normal to have registrations in this region.

Green bar = Normal working temperature. The Major part of the registrations shall be in this region.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

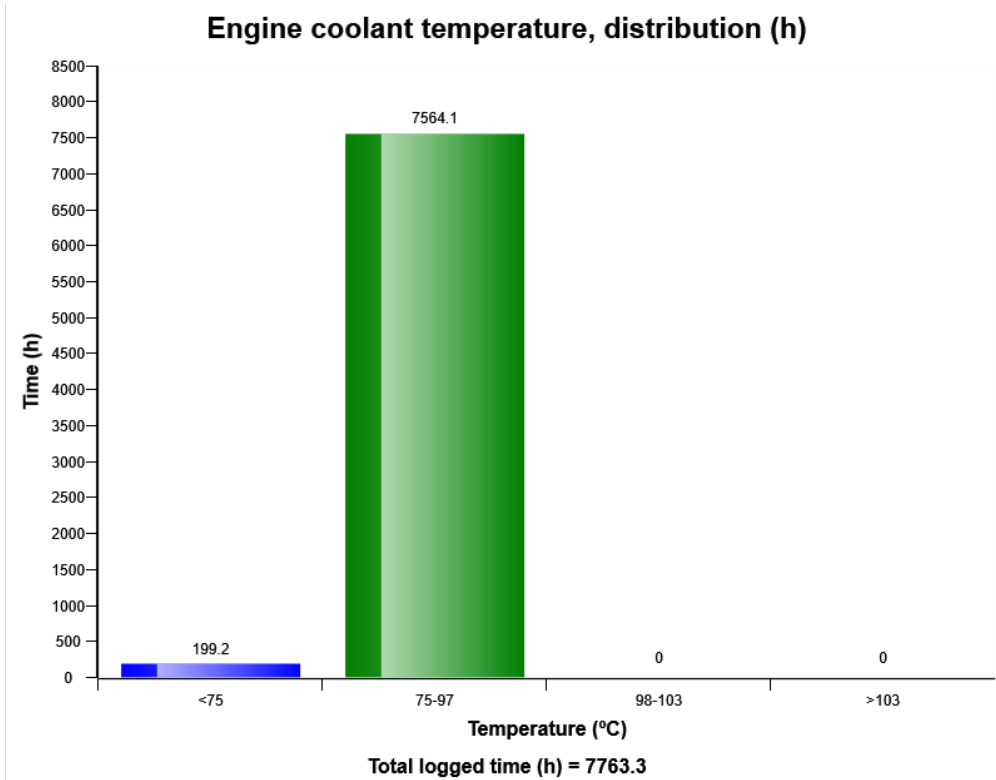
**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**Red bar** = Alarm.

Registrations in this region is not normal, running in this region may cause severe damage.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the time distribution of the temperature, while engine running.

**Explanation:**

Y-axis: Time

X-axis: Temperature distribution in classes.

Blue bar = Warm-up phase.

During the engine warm-up phase, this temperature region is passed.

It is normal to have registrations in this region.

Green bar = Normal working temperature. The Major part of the registrations shall be in this region.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

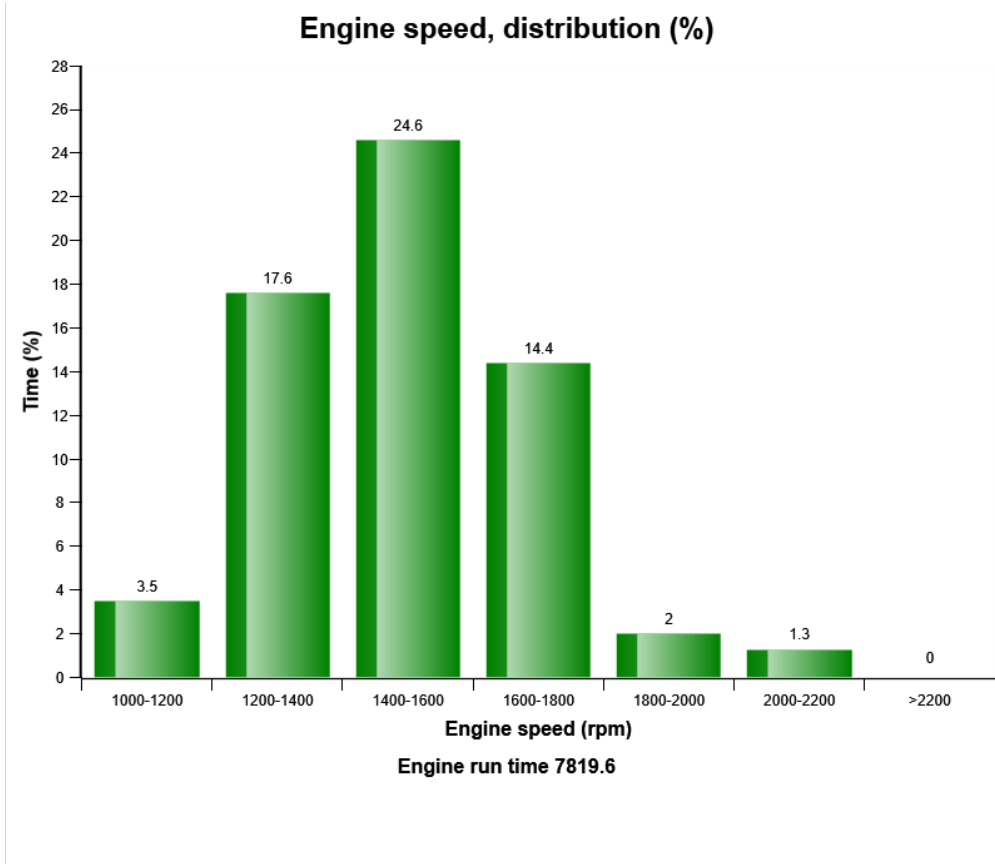
**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**Red bar** = Alarm.

Registrations in this region is not normal, running in this region may cause severe damage.



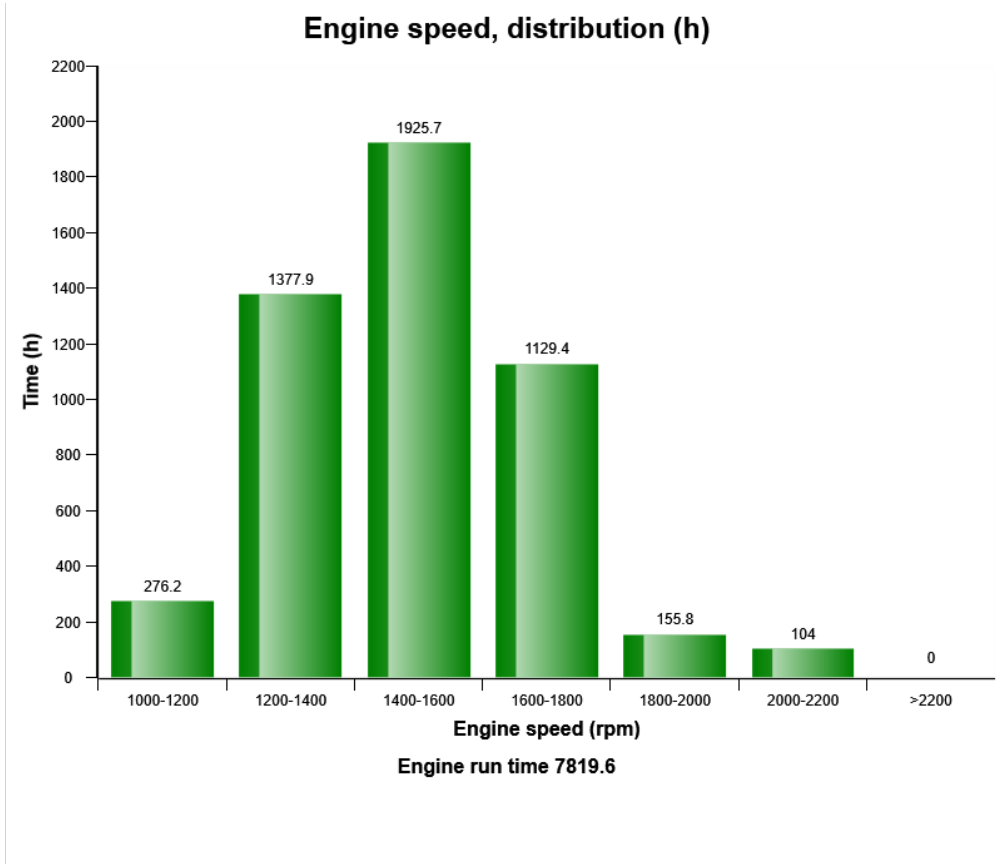
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



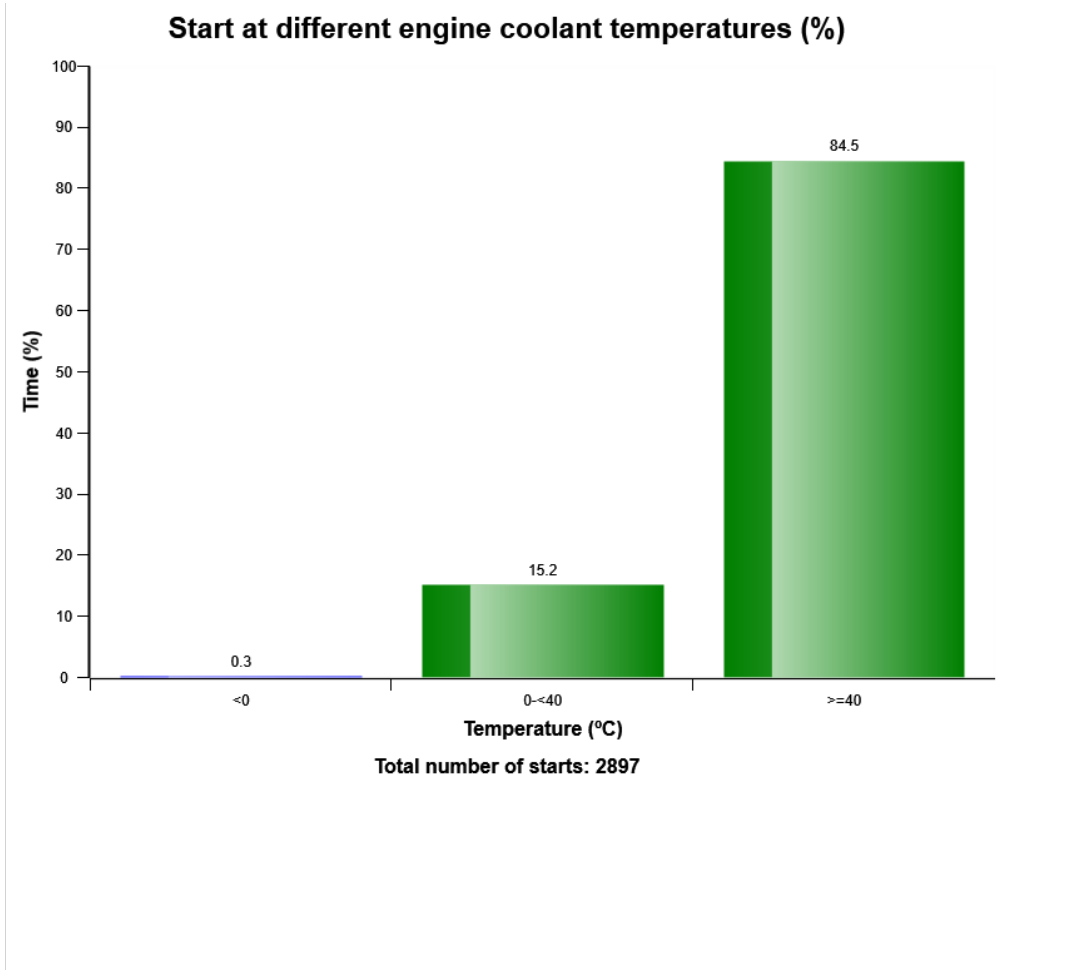
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
 'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the distribution of engine coolant temperature, at the starting moment.

**Explanation:**

Y-axis: Number of engine starts

X-axis: Engine coolant temperature.

A great proportion of engine wear is due to cold starts. Try to avoid extremely cold starts. Try using an electric coolant heater.

Under the graph the total number of engine starts is displayed.

Also see " *Number of starts / hour*" to get a complete picture of engine starting.

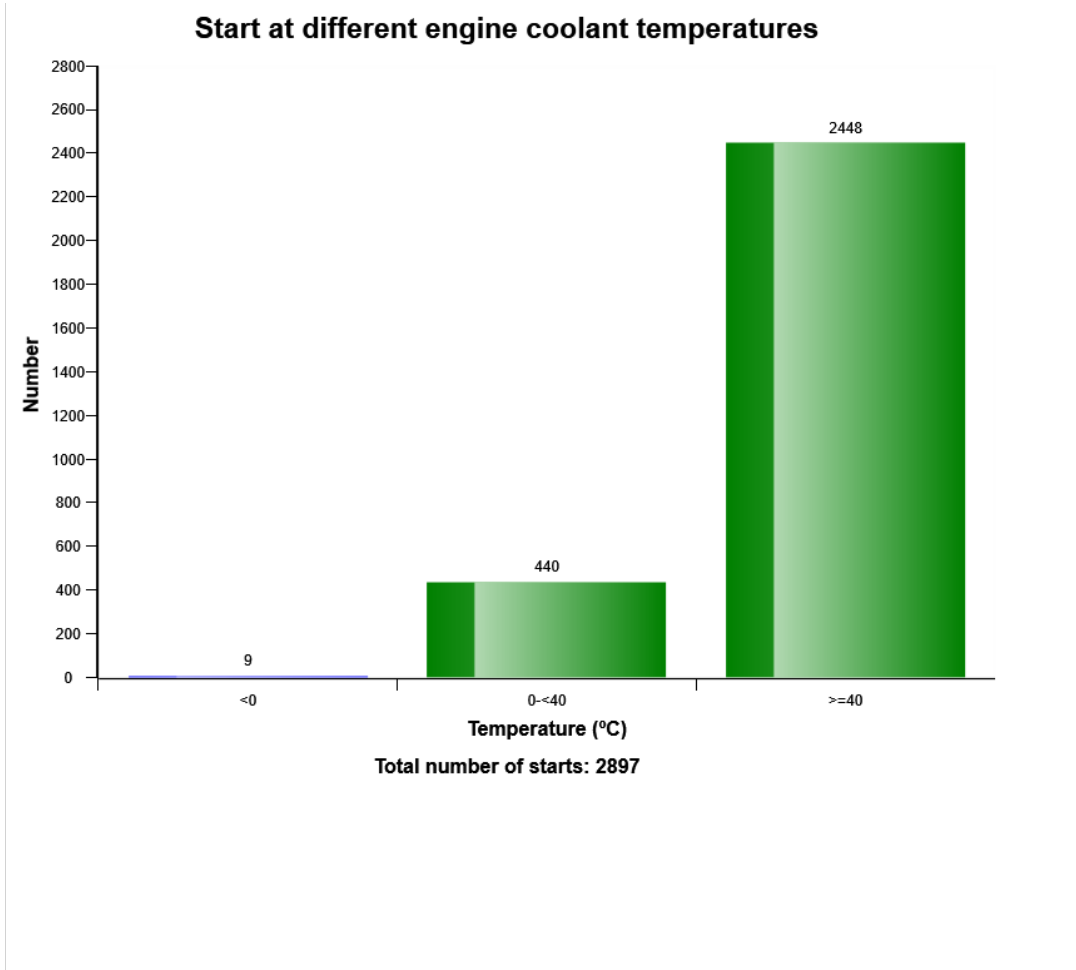


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the distribution of engine coolant temperature, at the starting moment.

**Explanation:**

Y-axis: Number of engine starts

X-axis: Engine coolant temperature.

A great proportion of engine wear is due to cold starts. Try to avoid extremely cold starts. Try using an electric coolant heater.

Under the graph the total number of engine starts is displayed.

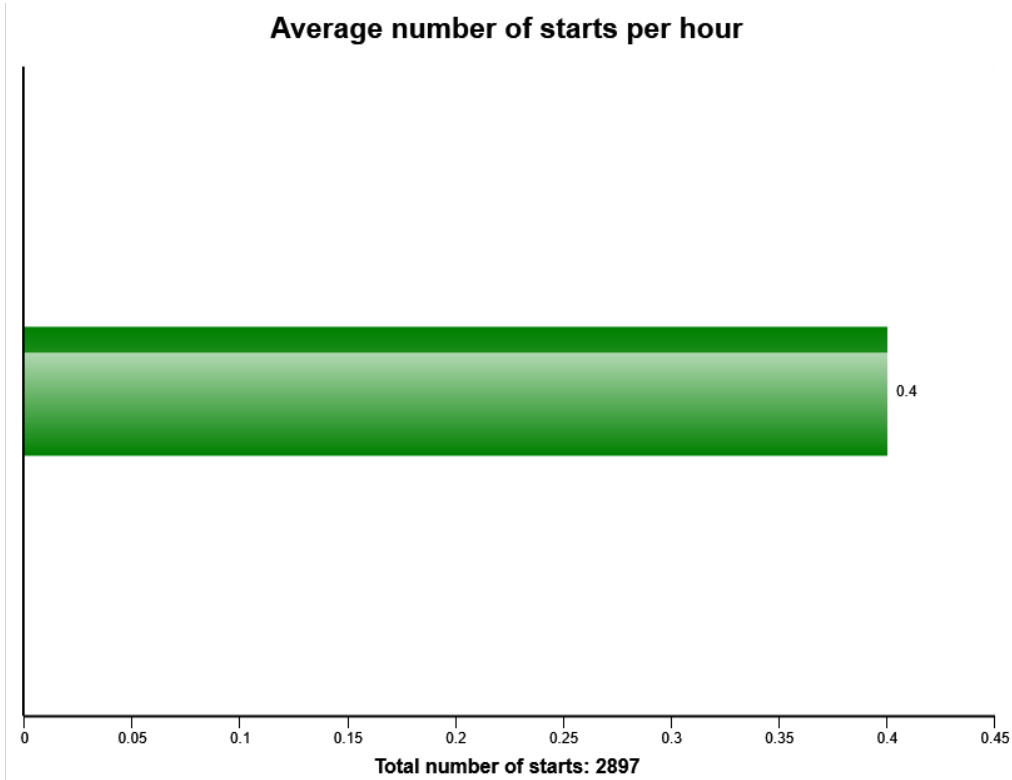
Also see " *Number of starts / hour*" to get a complete picture of engine starting.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph describes the average number of engine starts per engine running hour.

**Explanation:**

X-axis: Number of average starts per hour.

The actual time used for calculation, is time with engine on

If the fuel consumption is high one reason may be that the engine is not turned off often enough, perhaps machine is left idling for long periods. Check " Machine utilization".

The value can vary a lot depending on in which application the machine is used.

To see at which different temperatures engine is started see" Start at different engine temperatures."

Green bar = Number of average starts per hour



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**High engine coolant temperature  
Total number of occurrences = 0**

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° C)
<b>A</b>	0	2000	0	0	0	0	0	0
<b>B</b>	0	2000	0	0	0	0	0	0
<b>C</b>	0	2000	0	0	0	0	0	0
<b>D</b>	0	2000	0	0	0	0	0	0
<b>E</b>	0	2000	0	0	0	0	0	0
<b>F</b>	0	2000	0	0	0	0	0	0
<b>G</b>	0	2000	0	0	0	0	0	0
<b>H</b>	0	2000	0	0	0	0	0	0
<b>I</b>	0	2000	0	0	0	0	0	0
<b>J</b>	0	2000	0	0	0	0	0	0

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed.

**Duration :**

**The duration of each event is shown after the timestamp of the event.**

**The duration is counted as long as the criteria is fulfilled.**

**Extreme value :**

**The extreme value column displays the most extreme value during the event.**



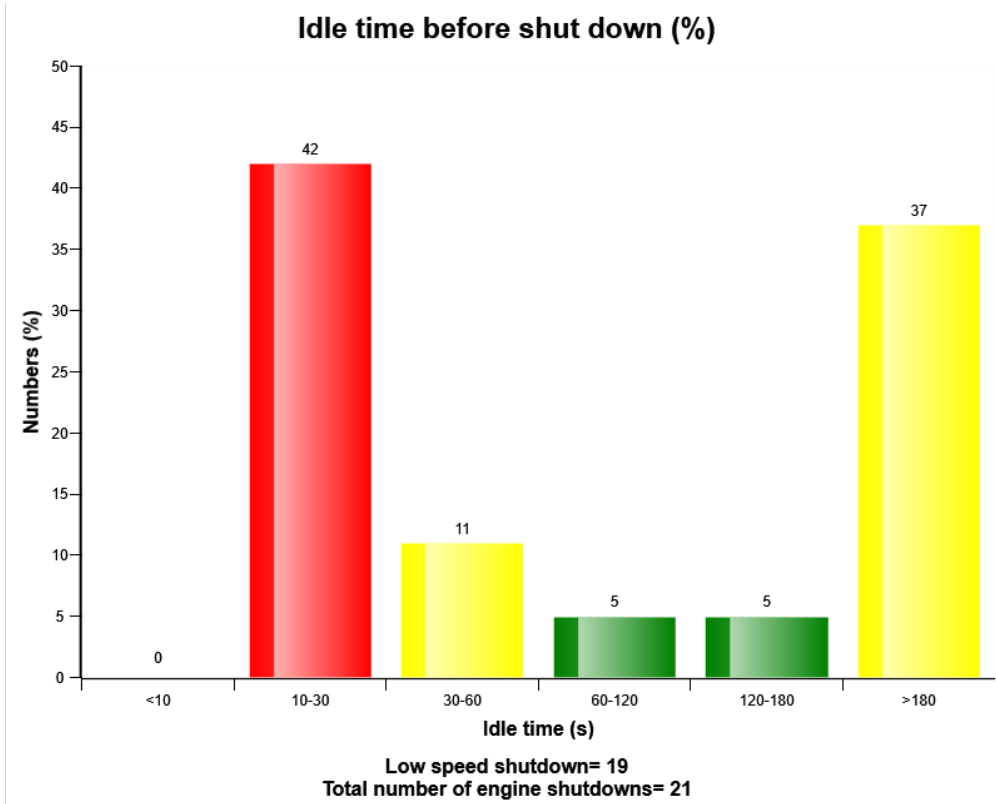
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Criteria :**

The criteria to get an registration, is that the alarm signal for high engine coolant temperature is active and that the diesel engine is running.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

This graph shows the distribution of delayed time at low idle speed until the engine is turned off.

The delayed time distribution for each bar is shown on top of its column in percentage.

The sum of bars is 100%.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**High engine oil temperature  
Total number of occurrences = 0**

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° C)
A	0	2000	0	0	0	0	0	0
B	0	2000	0	0	0	0	0	0
C	0	2000	0	0	0	0	0	0
D	0	2000	0	0	0	0	0	0
E	0	2000	0	0	0	0	0	0
F	0	2000	0	0	0	0	0	0
G	0	2000	0	0	0	0	0	0
H	0	2000	0	0	0	0	0	0
I	0	2000	0	0	0	0	0	0
J	0	2000	0	0	0	0	0	0

Definition :

**This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when an event has occurred.**

**The rows are not ordered chronological (The latest event may be in the middle).**

**Only one event per minute is registered.**

**Over the table the total number of events is displayed**

Duration :

**The duration of each event is shown after the timestamp of the event.**

**The duration is counted as long as the criteria is fulfilled.**

Extreme value :

**The extreme value column displays the most extreme value during the event.**



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Criteria :**

The criteria to get an registration, is that the alarm signal for high engine oil temperature is active and that the diesel engine is running.





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Starter overheating  
Total number of occurrences = 0**

Op hours	Year	Month	Day	Hour	Minute
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0

**Definition:**

The starter can be damaged if it is overheated.

Alarm is registered if the starter is used continuously more than 40 seconds and if it is less than five



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

minutes since the latest alarm .

### Explanation:

X-axis: Number of times that the starter alarm has been activated.



Machine model A40G	SerialNo 341260	Operating Hours 7819.1	Reading Date 7/23/2019
-----------------------	--------------------	---------------------------	---------------------------

**Low Air filter pressure**  
**Total number of occurrences = 0**

<b>Op hours</b>	<b>Year</b>	<b>Month</b>	<b>Day</b>	<b>Hour</b>	<b>Minute</b>	<b>Duration (sec)</b>
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when an



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed.

Duration :

**The duration of each event is shown after the timestamp of the event.**

**The duration is counted as long as the criteria is fulfilled.**

Criteria :

The criteria to get an registration, is that the alarm signal for air filter clogged is active, and that the diesel engine is running.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Regeneration ignored**  
**Total number of ignored regenerations 4**

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 0	2000	0	0	0	0	0
* 1434	2016	10	28	13	21	79
* 1434	2016	10	28	12	57	1
* 1434	2016	10	27	18	12	3
* 1630	2016	11	23	7	56	54



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Regeneration aborted**  
**Total number of occurrences = 0**

Op hours	Year	Month	Day	Hour	Minute
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0
0	2000	0	0	0	0



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Regeneration duration**  
**Total number of occurrences = 39**

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
3311	2017	4	22	11	14	48
3812	2017	5	30	6	50	11
3813	2017	5	30	8	43	45
4314	2017	7	10	15	11	17
4314	2017	7	10	16	9	40
4817	2017	9	20	17	12	47
5318	2017	11	16	1	24	45
5429	2017	12	30	22	14	50
5498	2018	1	8	12	32	60
5684	2018	2	14	10	55	45
5892	2018	3	5	12	29	47
6054	2018	3	18	8	2	46
6554	2018	5	3	9	21	26
6555	2018	5	3	16	4	31
7055	2018	6	10	16	7	46
7556	2018	7	13	9	0	1
7556	2018	7	13	9	5	29
7557	2018	7	13	9	41	29
7754	2019	1	21	23	57	15
7762	2019	1	22	8	2	15



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Water level warning in water separator**  
**Total number of occurrences = 0**

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0
0	2000	0	0	0	0	0





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**High voltage**  
**Total number of occurrences = 1**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
2834	2017	3	22	10	1	11	32
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed

**Duration :**

The duration of each event is shown after the timestamp of the event.

The duration is counted as long as the criteria is fulfilled.

**Extreme value :**

The extreme value column displays the most extreme value during the event.

**Criteria :**

Logging is performed when, Alarm high system voltage , is active.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Low voltage**  
**Total number of occurrences = 0**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed

**Duration :**

The duration of each event is shown after the timestamp of the event.

The duration is counted as long as the criteria is fulfilled.

**Extreme value :**

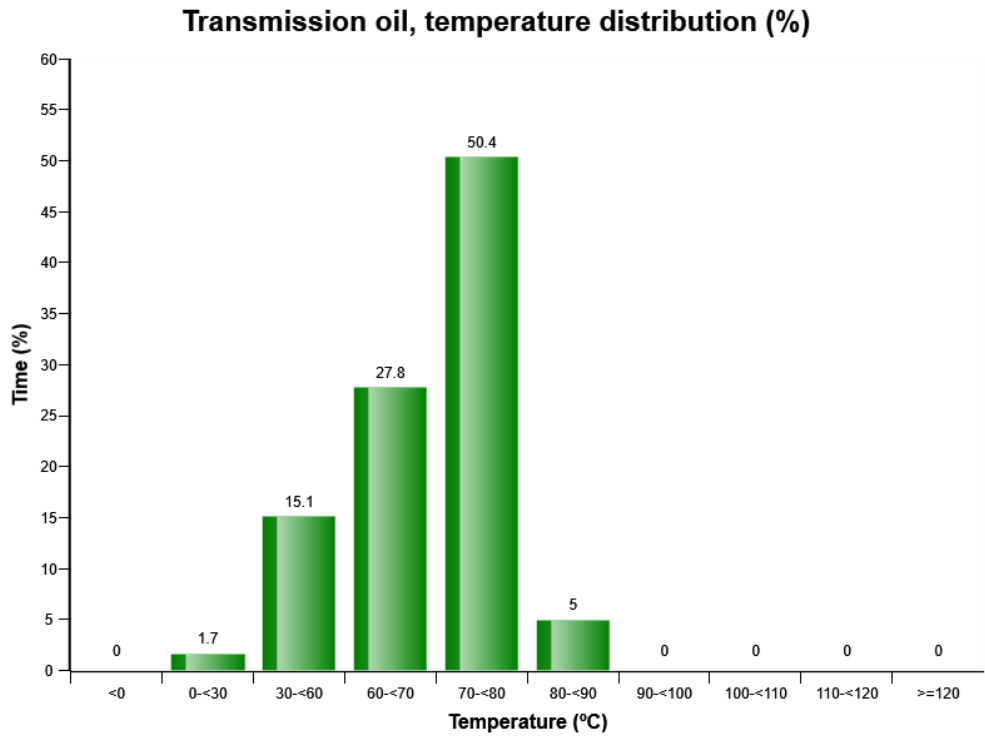
The extreme value column displays the most extreme value during the event.

**Criteria :**

Logging is performed when, Alarm low system voltage , is active.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the transmission oil temperature in various temperature ranges. The time is displayed in the following ten temperature ranges:

<0°C Temperatures below 0°C

0 - <30°C Temperatures from 0°C until 30°C

30-<60°C Temperatures from 30°C until 60°C

60-<70°C Temperatures from 60°C until 70°C

70-<80°C Temperatures from 70°C until 80°C

80-<90°C Temperatures from 80°C until 90°C

90-<100°C Temperatures from 90°C until 100°C

100-<110°C Temperatures from 100°C until 110°C



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

110-<120°C Temperatures from 110°C until 120°C

≥120°C Temperatures over 120°C

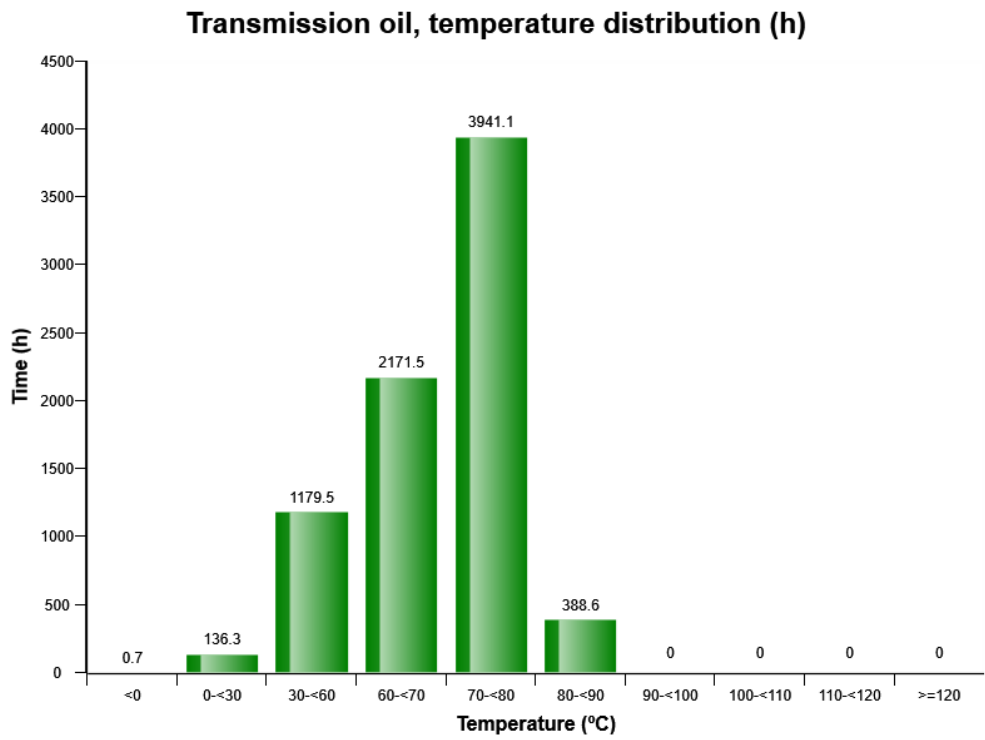
The bar that describes temperatures from 110°C until 120°C is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

The bar that describes >120°C is red and means that the oil has been overheated. Driver has been given red central warning.

Oil temperatures exceeding 110°C must be avoided since the properties of the oil are degraded



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the transmission oil temperature in various temperature ranges. The time is displayed in the following ten temperature ranges:

<0°C Temperatures below 0°C

0 - <30°C Temperatures from 0°C until 30°C

30-<60°C Temperatures from 30°C until 60°C

60-<70°C Temperatures from 60°C until 70°C

70-<80°C Temperatures from 70°C until 80°C

80-<90°C Temperatures from 80°C until 90°C

90-<100°C Temperatures from 90°C until 100°C

100-<110°C Temperatures from 100°C until 110°C



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

110-<120°C Temperatures from 110°C until 120°C

≥120°C Temperatures over 120°C

The bar that describes temperatures from 110° C until 120°C is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

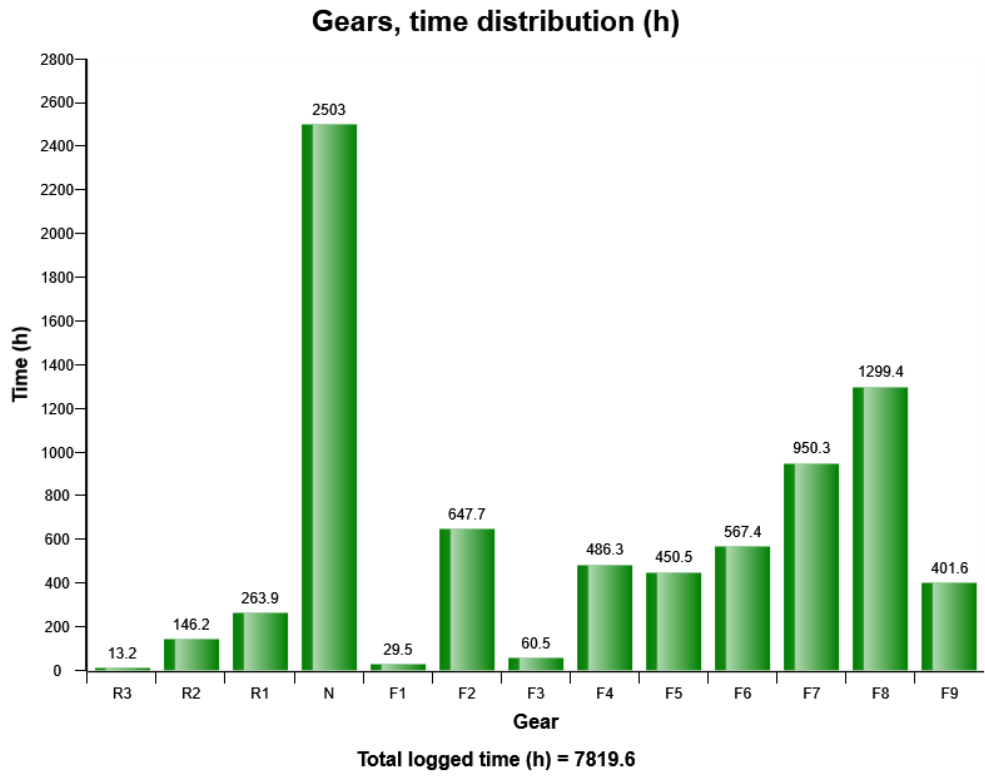
The bar that describes >120°C is red and means that the oil has been overheated. Driver has been given red central warning.

Oil temperatures exceeding 110°C must be avoided since the properties of the oil are degraded





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

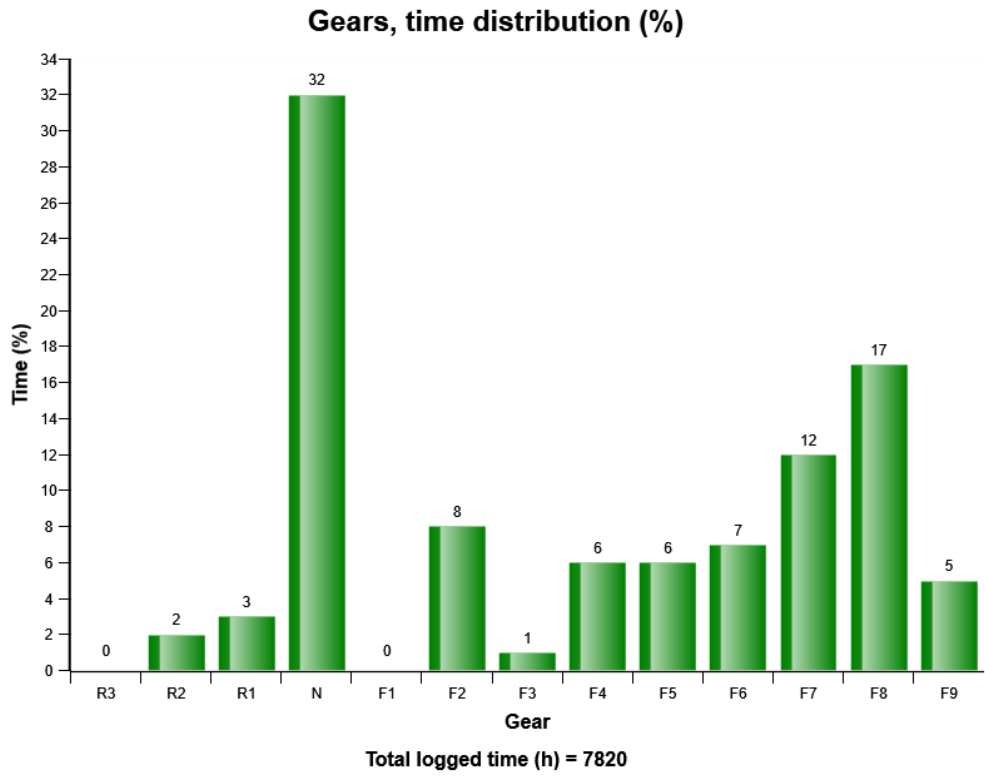


The diagram shows the time for each gear. Each bar represents a gear.

How the time is distributed between the gears depends on the operating conditions.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

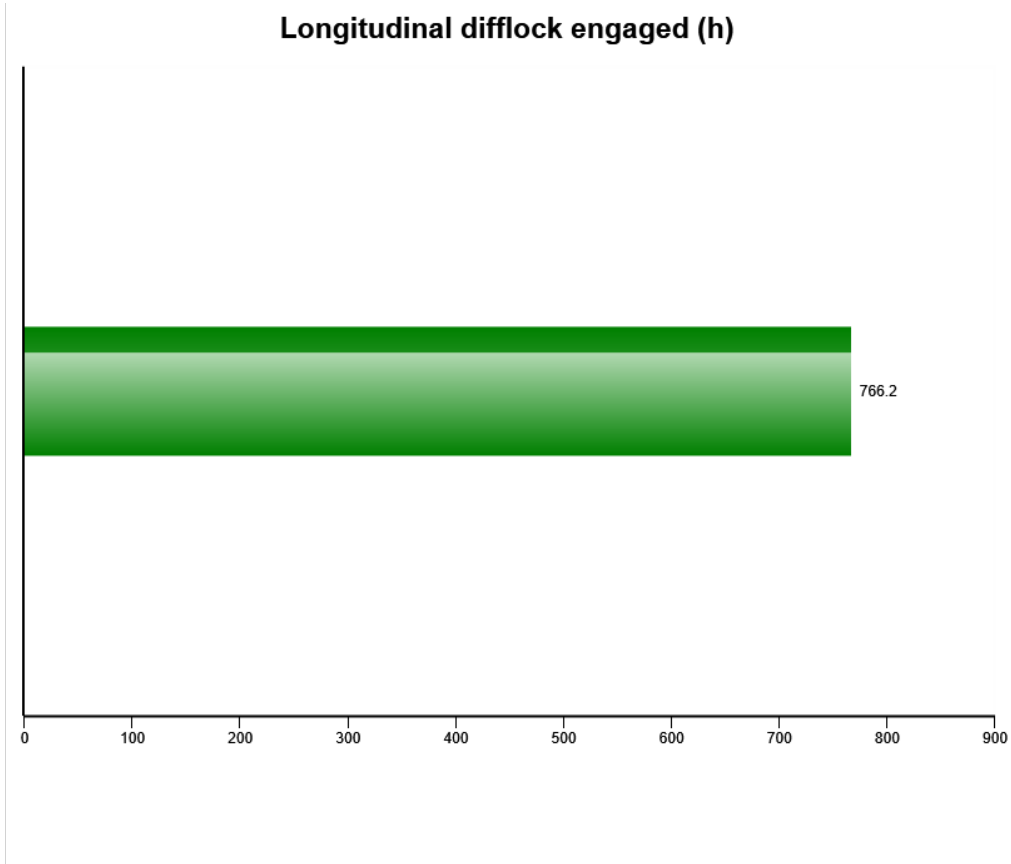


The diagram shows the time for each gear. Each bar represents a gear.

How the time is distributed between the gears depends on the operating conditions.



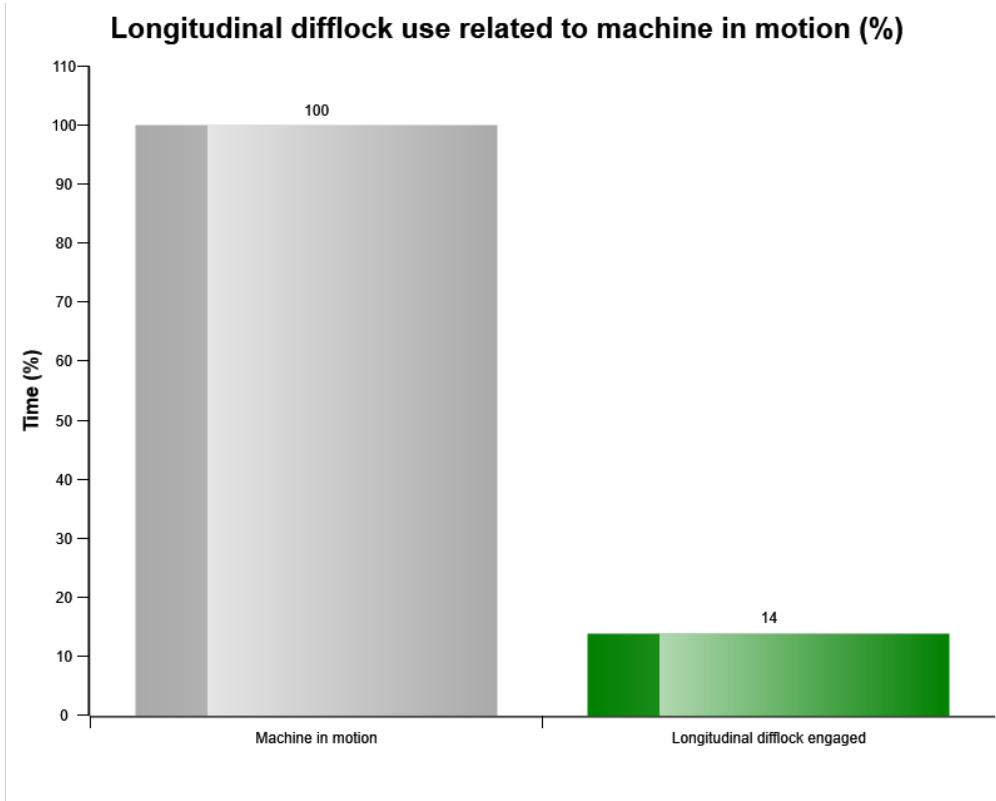
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows how long time in hours the longitudinal difflock has been engaged. The presentation only shows time when the machine is moving as this is when the wear on the difflock occurs. The difflock should always be disengage when not needed to avoid unnecessary wear.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



The diagram shows the percentage of engaged longitudinal difflock in relation to machine in motion.

The longitudinal difflock should always be disengaged when not needed to reduce wear.

The normal use of the longitudinal difflock in relation to the time that the machine has been operated depends on the operating conditions. Generally, the more offroad applications the machine operates in, the higher the longitudinal difflock use shall be in relation to the time that the machine has been operated. Also operating in uphill conditions on slippery surface can require longitudinal difflock.

Also check " Longitudinal difflock engaged (h)"



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Transmission oil pressure low**  
**Total number of occurrences = 4**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (bar)
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
720	2016	8	30	12	9	0	73
1529	2016	11	8	20	41	0	64
5344	2017	11	15	14	14	0	82
5626	2018	2	4	13	27	0	48

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when an



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed.

Duration :

**The duration of each event is shown after the timestamp of the event.**

**The duration is counted as long as the criteria is fulfilled.**

Extreme value :

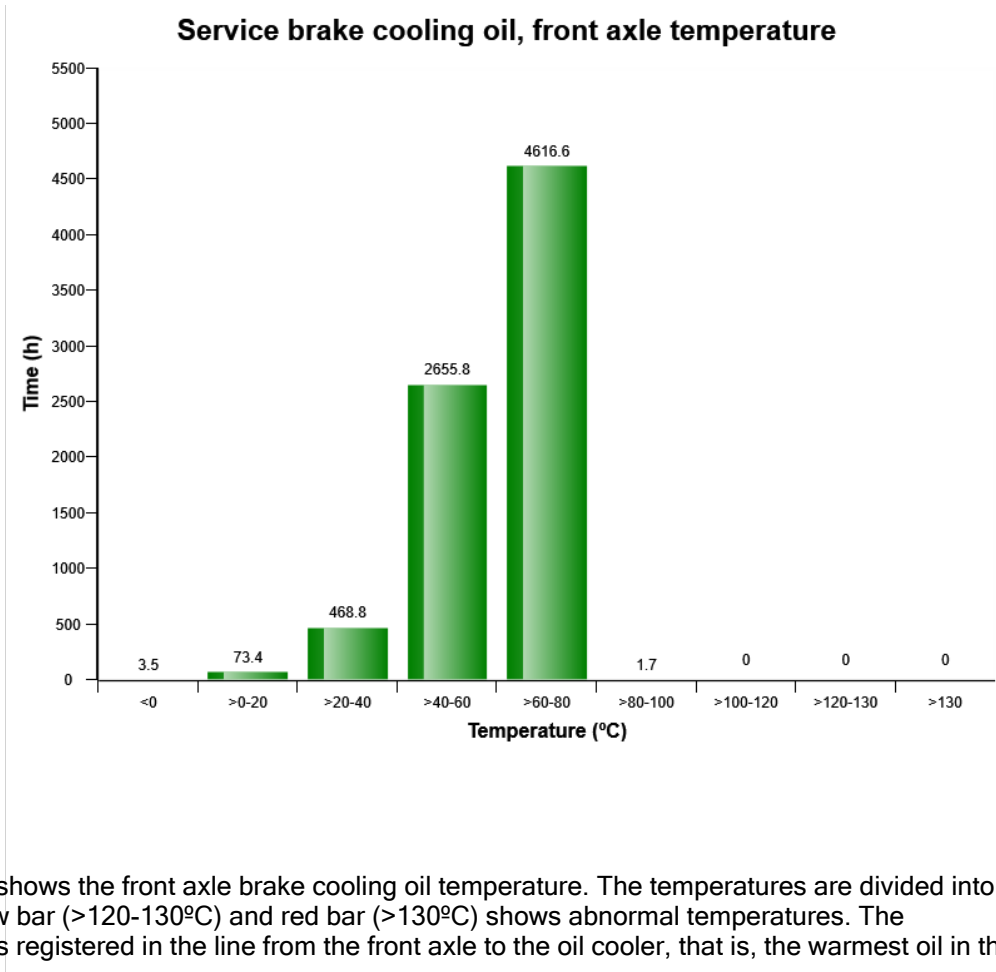
**The extreme value column displays the most extreme value during the event.**

Criteria :

In order for an occurrence of low transmission oil pressure to be recorded in a data point and the count to increment by 1, the transmission oil pressure state must change from "normal" or "error" to "low." The event of low transmission oil pressure will end when the status changes from "low" back to "normal" or "error."



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

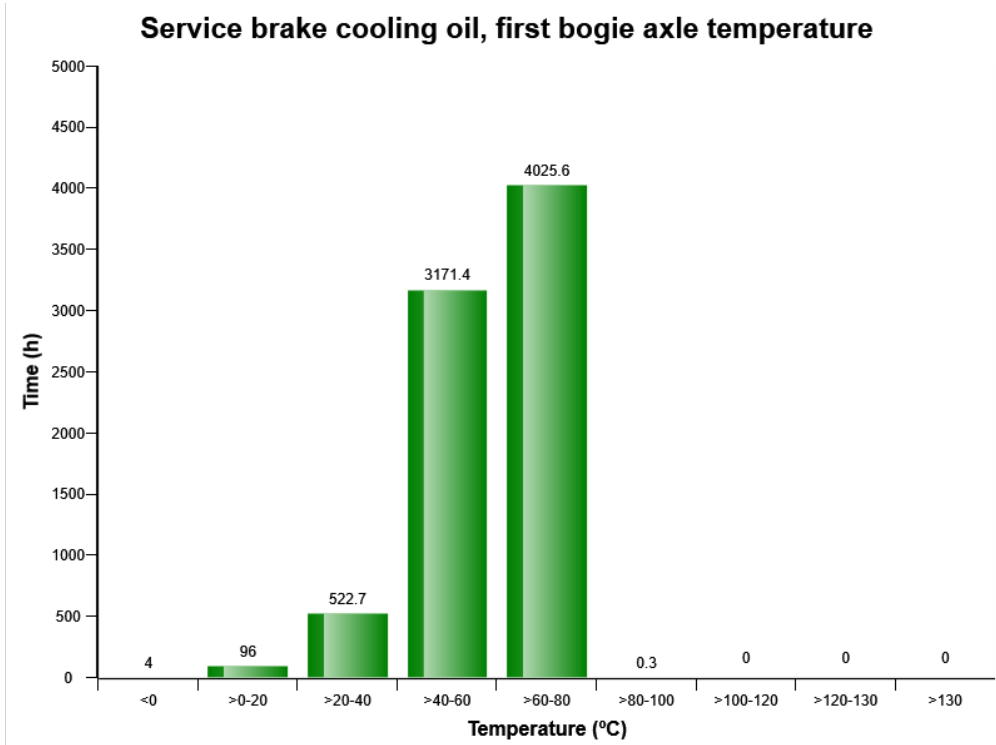


The diagram shows the front axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>120-130°C) and red bar (>130°C) shows abnormal temperatures. The temperature is registered in the line from the front axle to the oil cooler, that is, the warmest oil in the circuit.

The temperature shown by yellow and red bars degrade the properties of the cooling oil, and may be the result of incorrect and hard operation of the machine. Check the brake pressure distribution in the diagram "Service brake pressure, distribution (%)". If the brake cooling oil temperature is high despite normal distribution of service brake pressure, there is probably a malfunction in the brake cooling circuit



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



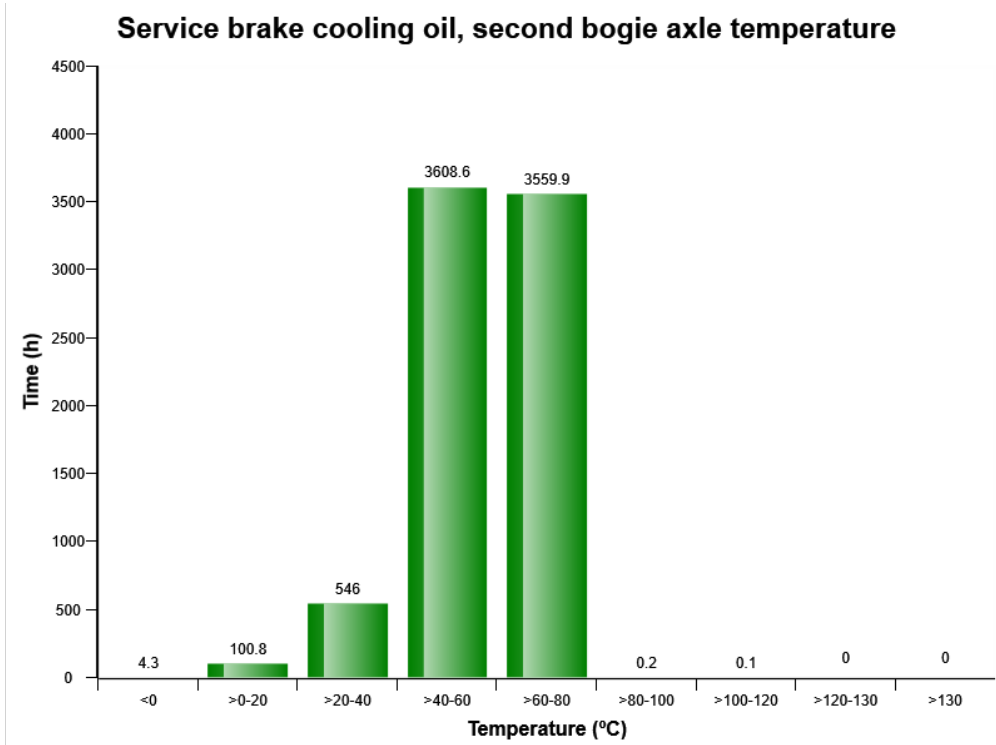
The diagram shows the first bogie axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>120-130°C) and red bar (>130°C) shows abnormal temperatures. The temperature is registered in the line from the first bogie axle to the oil cooler, that is, the warmest oil in the circuit.

The temperature shown by yellow and red bars degrade the properties of the cooling oil, and may be the result of incorrect and hard operation of the machine. Check the brake pressure distribution in the diagram "Service brake pressure, distribution (%)". If the brake cooling oil temperature is high despite normal distribution of service brake pressure, there is probably a malfunction in the brake cooling circuit





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

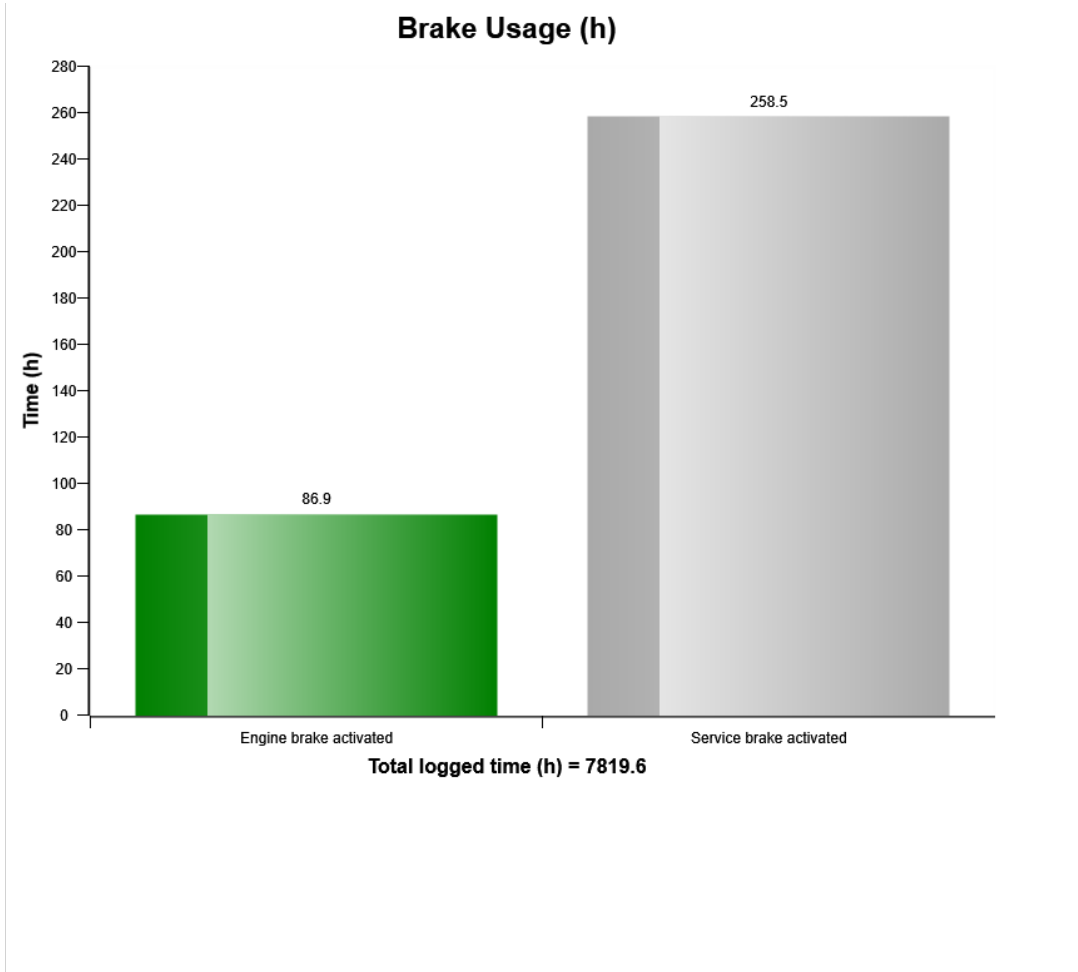


The diagram shows the Service brake cooling oil, second bogie axle temperature. The temperatures are divided into ranges, yellow bar (>120-130°C) and red bar (>130°C) shows abnormal temperatures. The temperature is registered in the line from the second bogie axle to the oil cooler, that is, the warmest oil in the circuit.

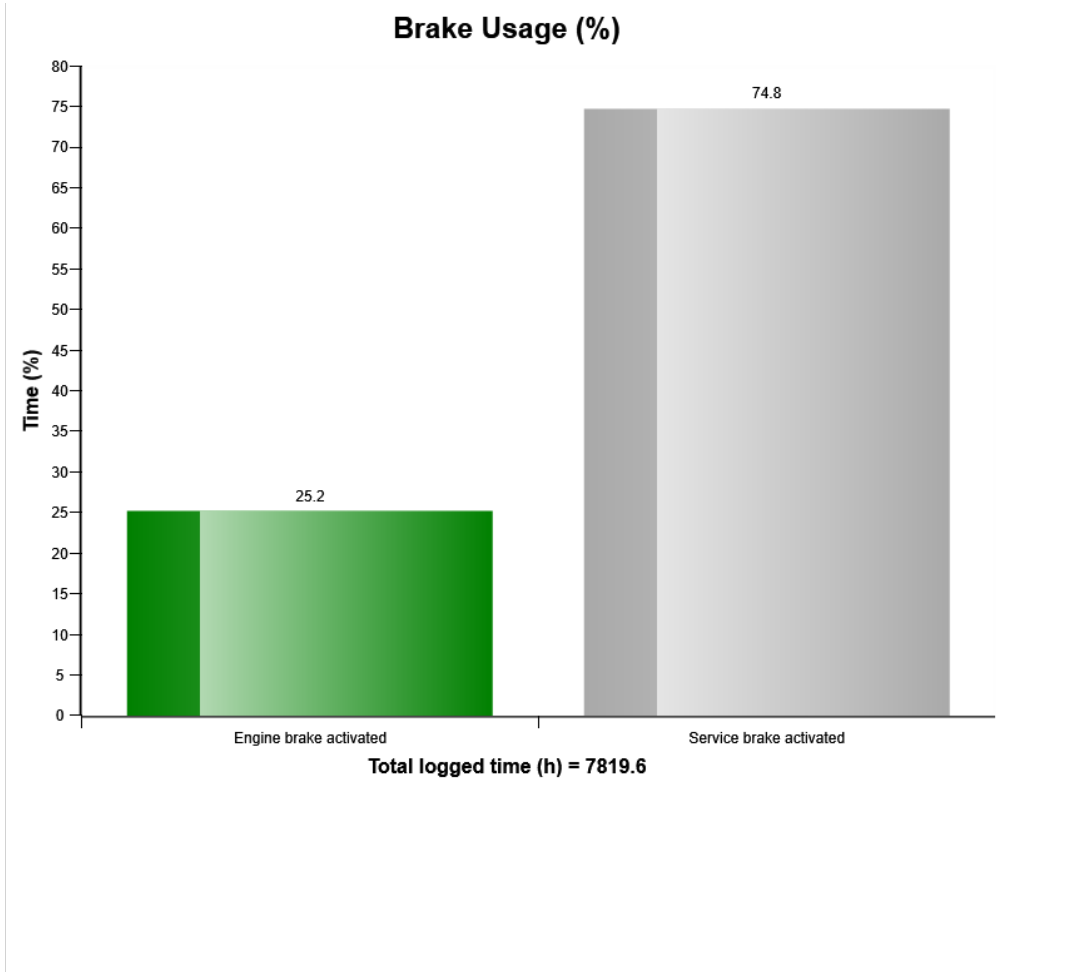
The temperature shown by yellow and red bars degrade the properties of the cooling oil, and may be the result of incorrect and hard operation of the machine. Check the brake pressure distribution in the diagram "Service brake pressure, distribution (%)". If the brake cooling oil temperature is high despite normal distribution of service brake pressure, there is probably a malfunction in the brake cooling circuit



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Low Brake Servo Pressure**  
**Total number of occurrences = 7**

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (bar)
H	0	2000	0	0	0	0	0	0
I	0	2000	0	0	0	0	0	0
J	0	2000	0	0	0	0	0	0
A	926	2016	9	13	7	17	0	152
B	2965	2017	3	29	17	36	10	150
C	4016	2017	6	10	6	34	0	146
D	4023	2017	6	10	13	40	0	151
E	5402	2017	12	26	6	35	10	156
F	6646	2018	5	7	6	13	0	156
G	7794	2018	9	8	8	31	0	156

Definition :

**This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when an event has occurred.**

**The rows are not ordered chronological (The latest event may be in the middle).**

**Only one event per minute is registered.**

**Over the table the total number of events is displayed**

Duration :

**The duration of each event is shown after the timestamp of the event.**

**The duration is counted as long as the criteria is fulfilled.**

Extreme value :

**The extreme value column displays the most extreme value during the event.**



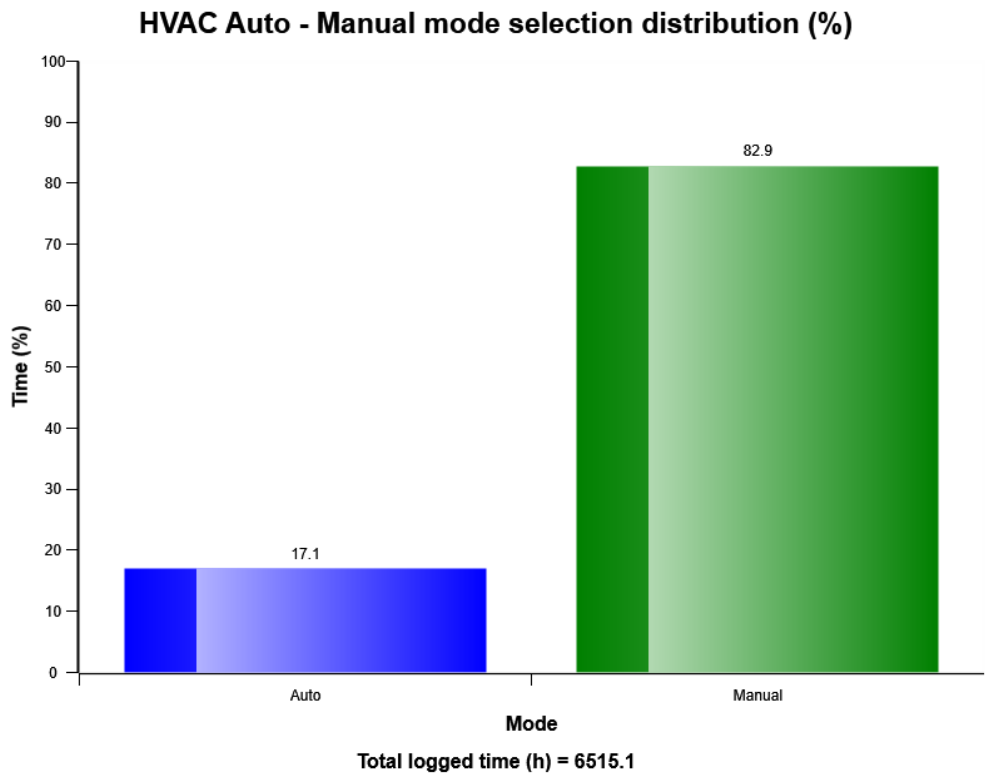
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Criteria :**

In order for an occurrence of low brake servo pressure to be recorded in a data point and the count to increment by 1, the low brake servo pressure state must be alarm. Gear not in Neutral and engine must be on.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



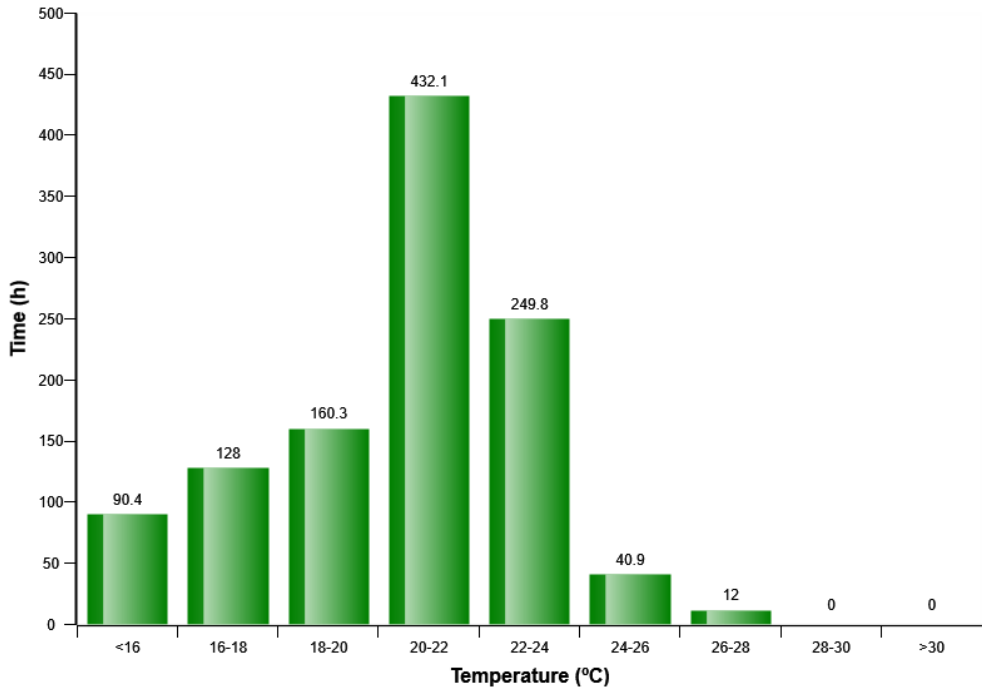
**Definition:**

The diagram describes auto-manual mode selection distribution of HVAC system in machine while it Works. The share of each mode compared to Total time of HVAC operation is displayed.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**HVAC air temperature setting in auto control mode distribution (h)**

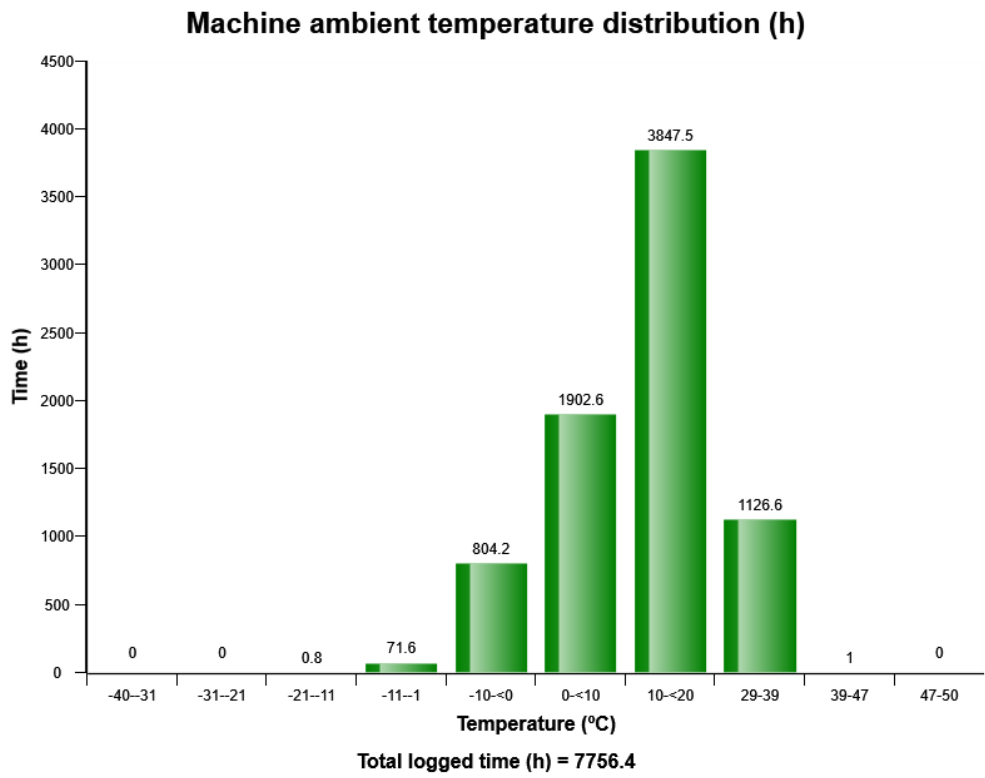


**Definition:**

The diagram describes air temperature setting distribution for HVAC auto control mode established by operator in Cabin



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



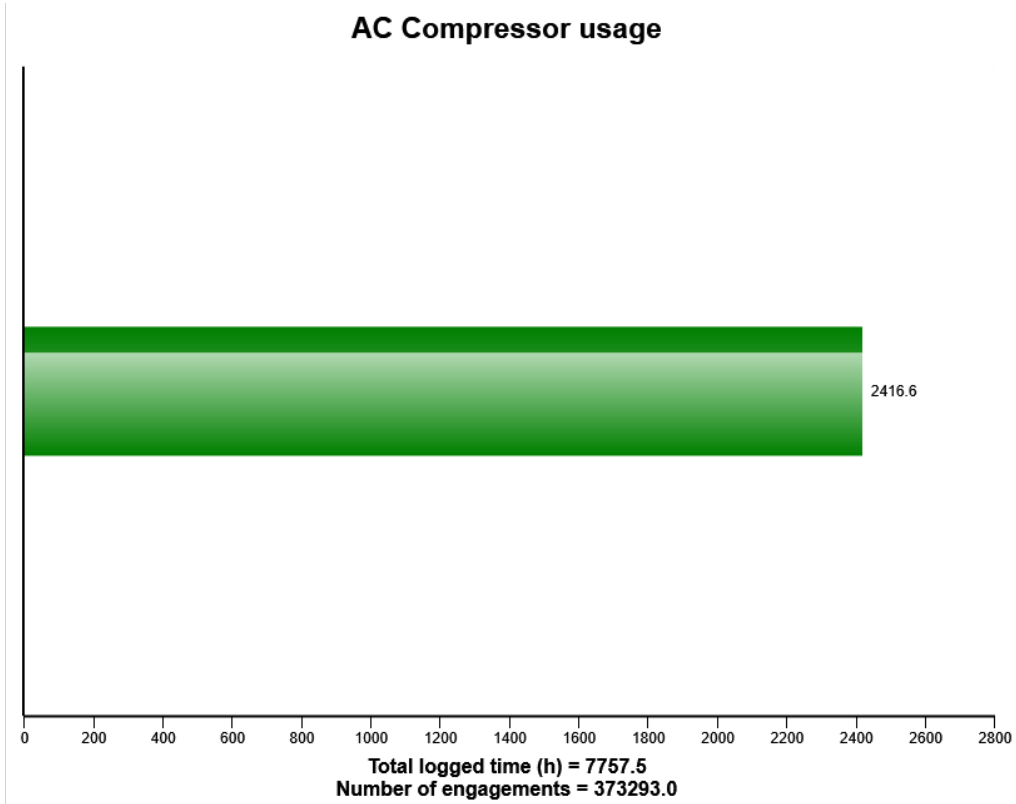
**Definition:**

The diagram describes ambient temperature distribution of the machine while machine operates.





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the total time of AC compressor engagement.

**Explanation:**

Green bar: Total time in hours, AC compressor has been engaged.

Under the graph the total engine running time (in hours) is displayed.

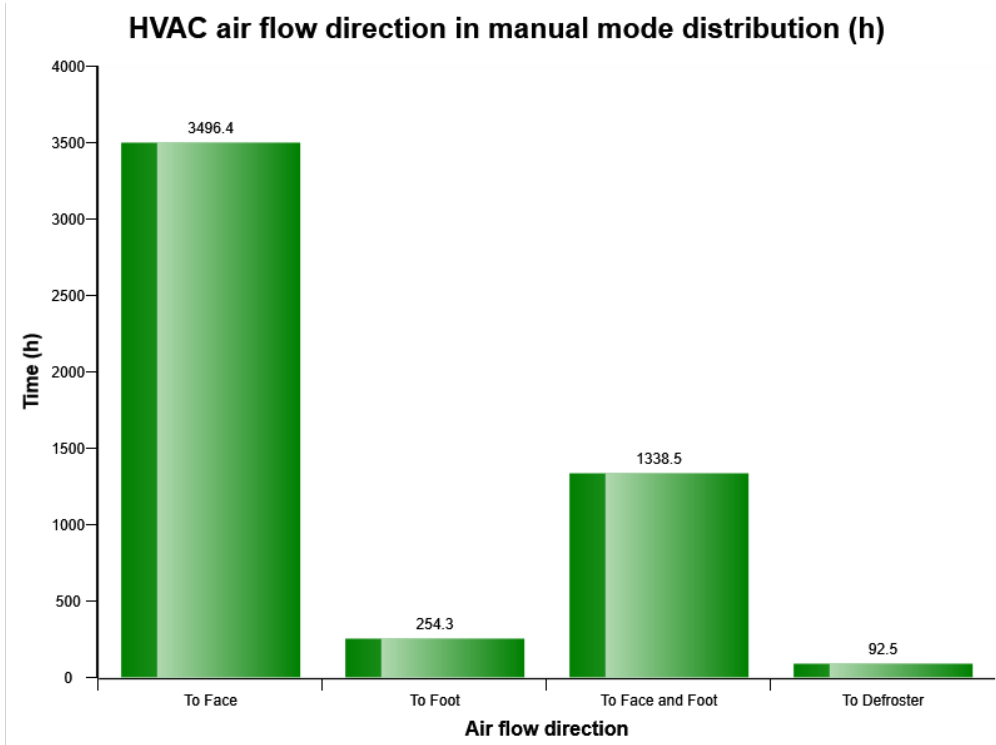
Total number of AC compressor activations is also displayed.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

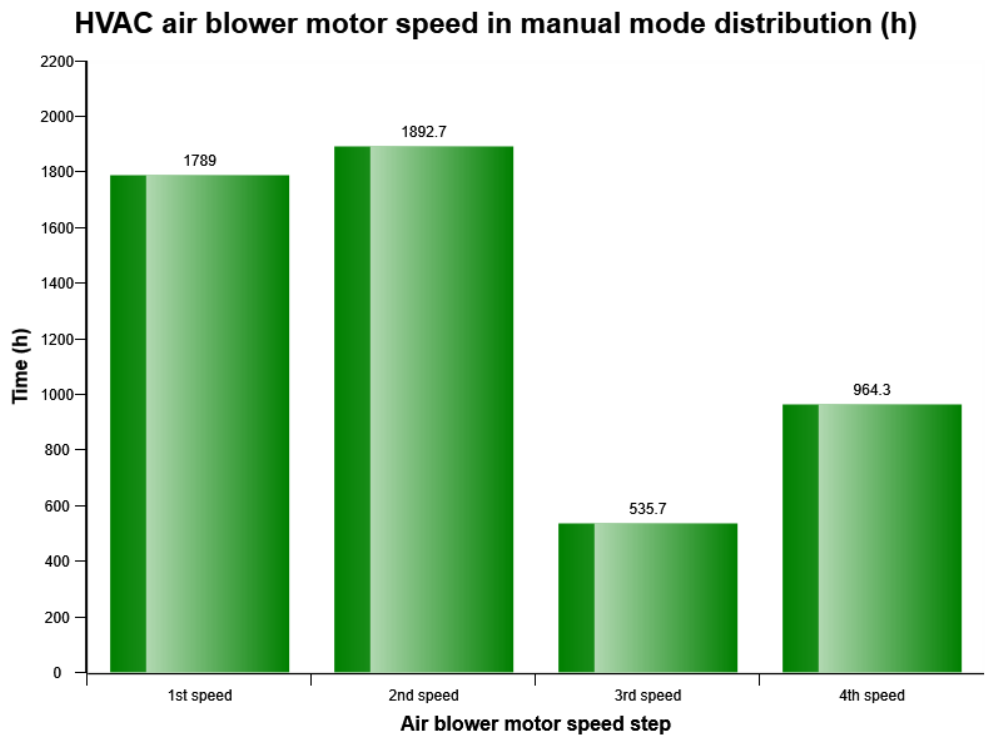


**Definition:**

The diagram describes air flow direction distribution for HVAC manual control mode established by operator in Cabin.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The diagram describes air blower motor speed distribution for HVAC manual control mode established by operator in Cabin.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**AC High Pressure**  
**Total number of occurrences = 26**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° C)
6941	2018	12	10	16	15	167	33
7236	2018	6	19	11	52	64	33
7239	2018	6	19	14	27	26	36
7240	2018	6	19	16	6	18	37
7256	2018	6	20	17	5	56	34
7411	2018	6	29	15	57	66	35
7442	2018	7	1	15	21	22	35
7462	2018	7	2	16	11	20	32
7491	2018	7	6	17	16	27	32
7492	2018	7	6	17	31	22	33
7584	2018	7	11	16	5	114	35
7585	2018	7	11	16	30	141	36
7586	2018	7	11	17	53	20	35
7586	2018	7	11	17	42	24	35
7587	2018	7	11	18	48	14	33
7682	2018	7	26	17	17	22	30
7726	2018	8	4	9	48	32	27
7744	2018	8	5	16	20	26	32
7744	2018	8	5	14	43	40	32
7760	2018	8	6	16	16	240	35

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed

**Duration :**

The duration of each event is shown after the timestamp of the event.

The duration is counted as long as the criteria is fulfilled.

**Extreme value :**

The extreme value column displays the most extreme value during the event.

**Criteria :**

Logging is performed when, High AC Pressure signal is active. Ambient temp is viewed.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**AC Boiling Protection**  
**Number of engagements = 0**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° C)
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed

**Duration :**

The duration of each event is shown after the timestamp of the event.

The duration is counted as long as the criteria is fulfilled.

**Extreme value :**

The extreme value column displays the most extreme value during the event.

**Criteria :**

Logging is performed when, Boiling protection signal is active. Ambient temp is viewed.





Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**AC System Cut Out Pressure**  
**Total number of occurrences = 4**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° C)
0	2255	12	3	16	56	656	-1
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
0	2000	0	0	0	0	0	0
1936	2000	10	26	17	13	626	-7
5523	2001	10	24	18	33	1231	0
5532	2001	10	25	18	32	433	-1

**Definition :**

This type of table shows the latest occasions when a specific event has occurred. When a specified criteria is fulfilled a registration is made. Each table row corresponds to one occasion. Operating hours is displayed in the first column, followed by year, month, day, hour and minute to show when



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

an event has occurred.

The rows are not ordered chronological (The latest event may be in the middle).

Only one event per minute is registered.

Over the table the total number of events is displayed

**Duration :**

The duration of each event is shown after the timestamp of the event.

The duration is counted as long as the criteria is fulfilled.

**Extreme value :**

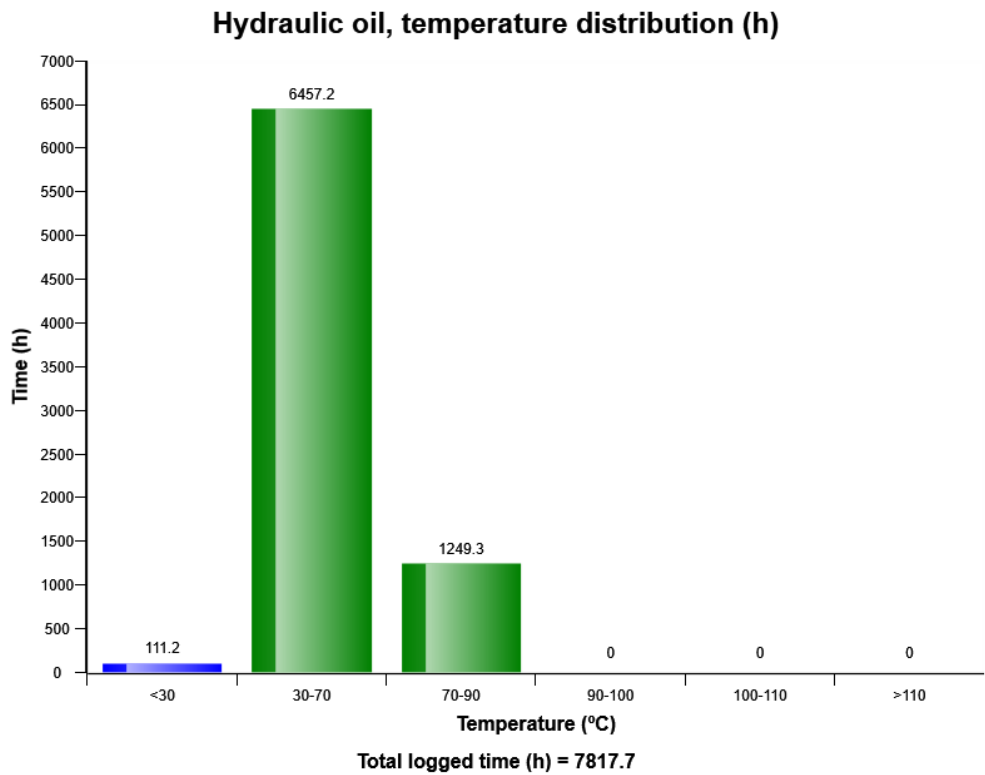
The extreme value column displays the most extreme value during the event.

**Criteria :**

Logging is performed when, AC cut out pressure signal is active. Ambient temp is viewed.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the time distribution of the temperature, while engine running.

**Explanation:**

Y-axis: Time

X-axis: Temperature distribution in classes.

Blue bar = Warm-up phase.

During the engine warm-up phase, this temperature region is passed.

It is normal to have registrations in this region.

Green bar = Normal working temperature. The Major part of the registrations shall be in this region.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

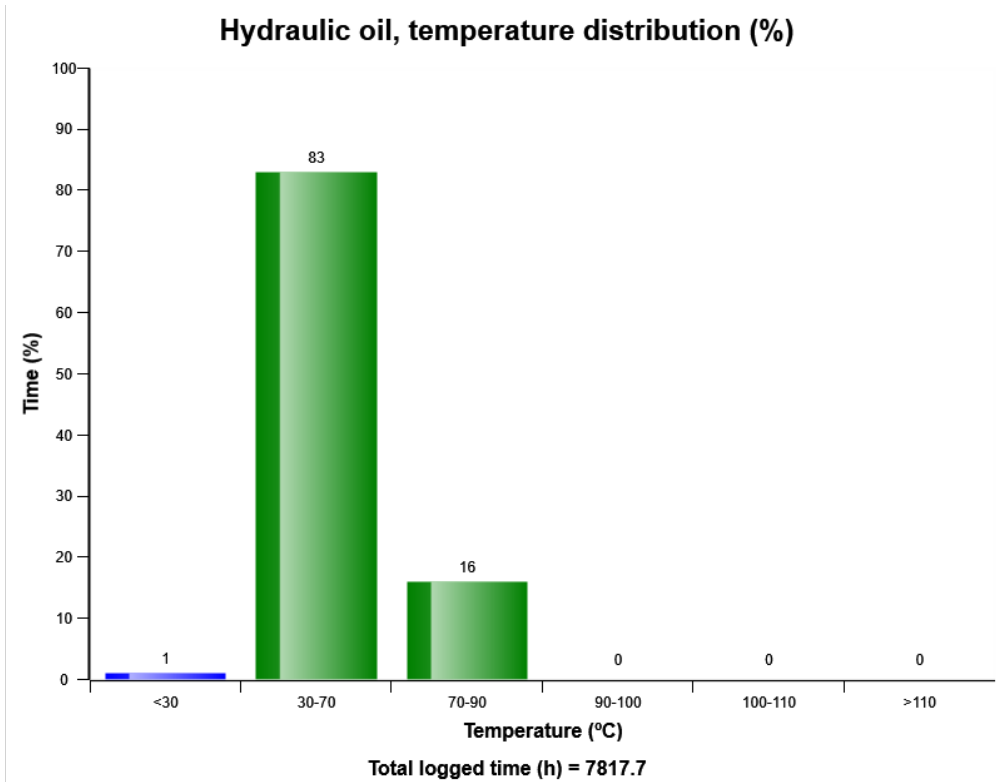
**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**Red bar** = Alarm.

Registrations in this region is not normal, running in this region may cause severe damage.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019



**Definition:**

The graph shows the time distribution of the temperature, while engine running.

**Explanation:**

Y-axis: Time

X-axis: Temperature distribution in classes.

Blue bar = Warm-up phase.

During the engine warm-up phase, this temperature region is passed.

It is normal to have registrations in this region.

Green bar = Normal working temperature. The Major part of the registrations shall be in this region.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341260	7819.1	7/23/2019

**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**Red bar** = Alarm.

Registrations in this region is not normal, running in this region may cause severe damage.

