

# VOLVO CONSTRUCTION EQUIPMENT MATRIS REPORT

Machine model <b>A40G</b>	SerialNo <b>342009</b>	Operating Hours <b>5066.6</b>	Reading Date <b>30/09/2019</b>
Company name <b>volvo</b>	Dealer <b>arnold machinery</b>	Report Issuer	
Contact name <b>mike seifert</b>	Technician <b>CE Tech</b>	Primary Application <b>Sand, gravel and pebble</b>	
Site	Workorder	Ground Condition	

MATRIS Reading, Summary / Recommendation

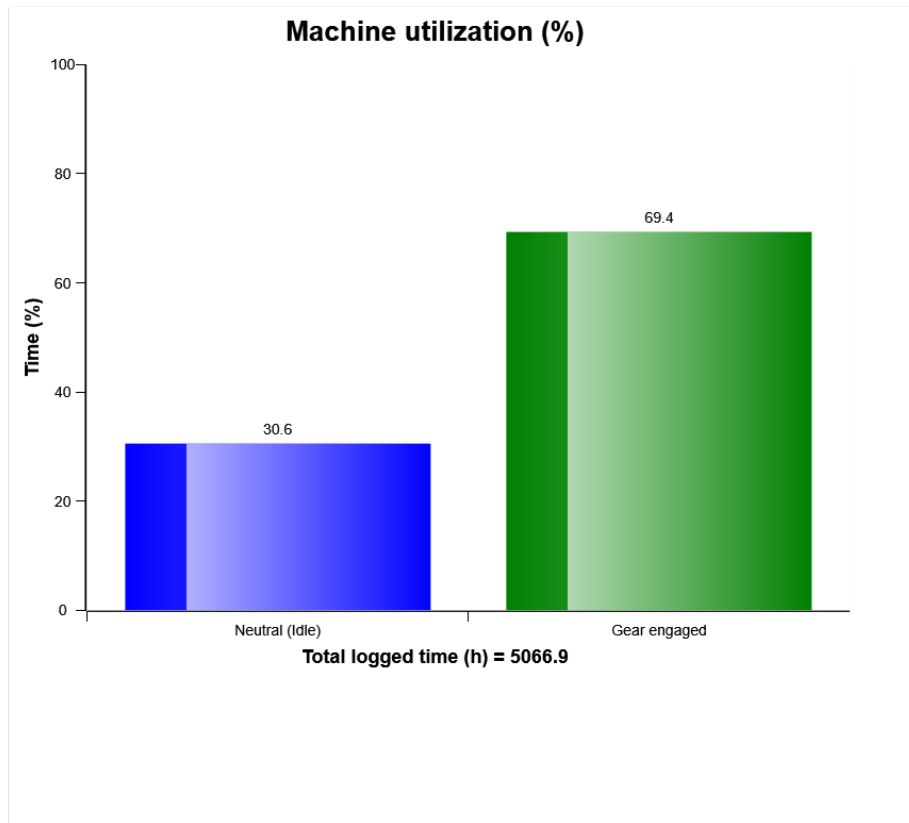


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A40G	342009	5066.6	30/09/2019

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



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A40G	342009	5066.6	30/09/2019



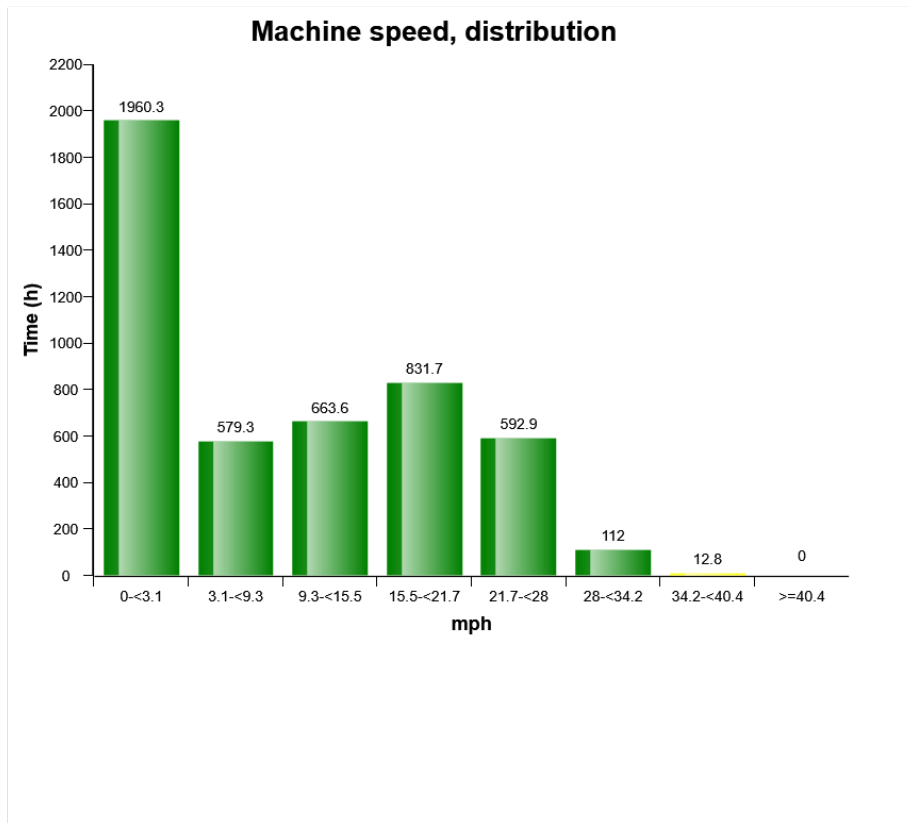
The diagram shows a simplified presentation of the machines utilization based on the relation between time in gear and time in neutral. The "Gear engaged " includes both forward and reverse gears.

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



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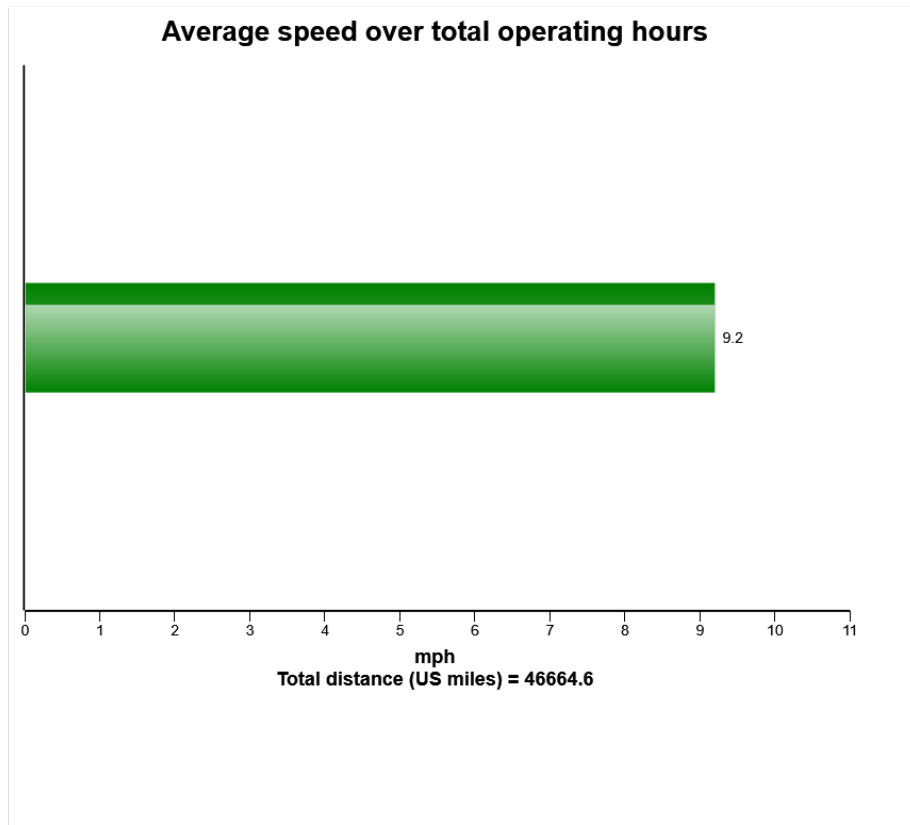


The presentation shows the time in hours in speed-intervals for the machine.

Note that the interval 0-3,1 mile/h includes machine not in motion. If the machine has been operated above 34,2 Mile/h there is a risk of engine over speed, check "Engine speed, over 2100 rpm"



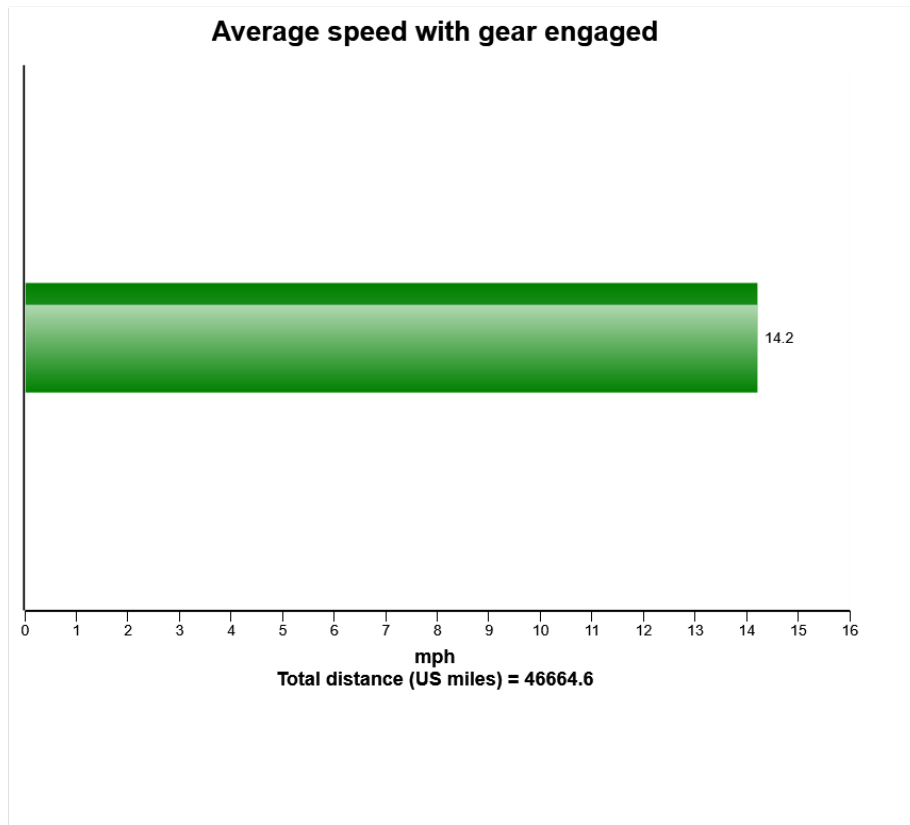
Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the machines average speed based on the total operating hours



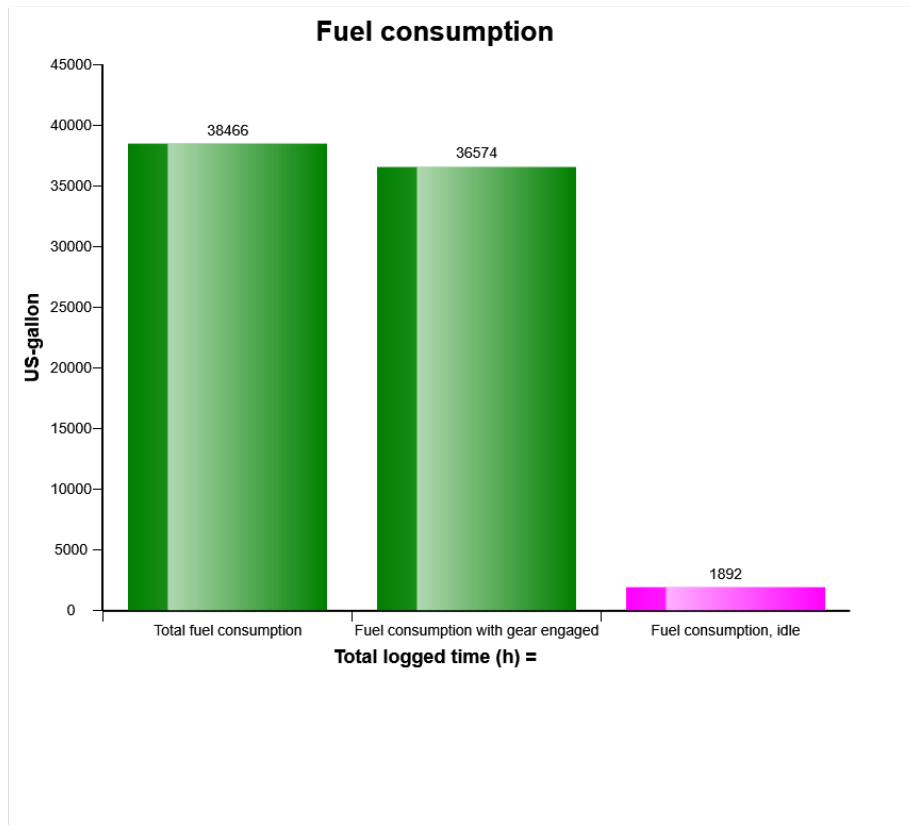
Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

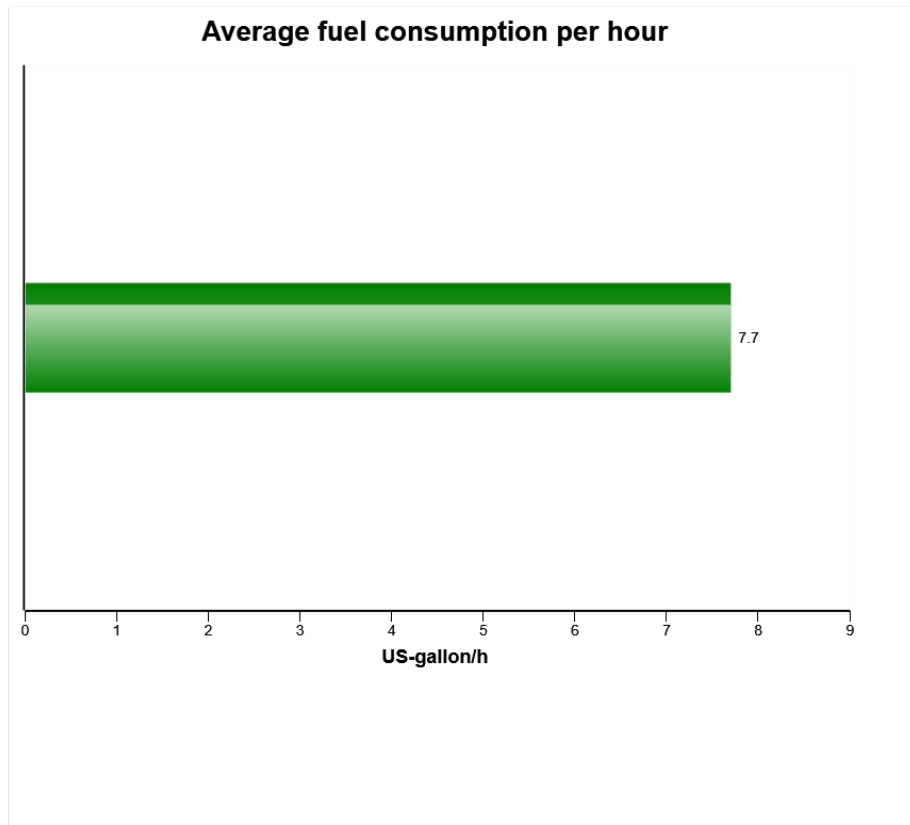


The diagram shows the total fuel consumption, fuel consumption with gear engaged and fuel consumption during idle.

High fuel consumption during idle can indicate that the machine is not fully utilized.



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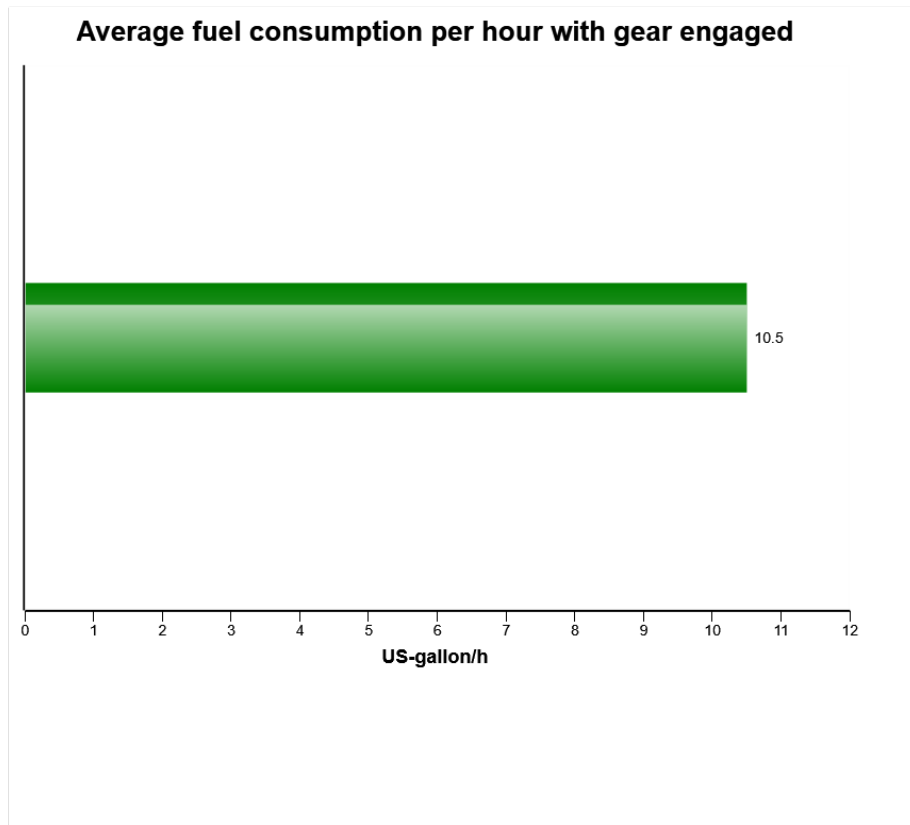


The diagram shows the average fuel consumption based on total operating hours





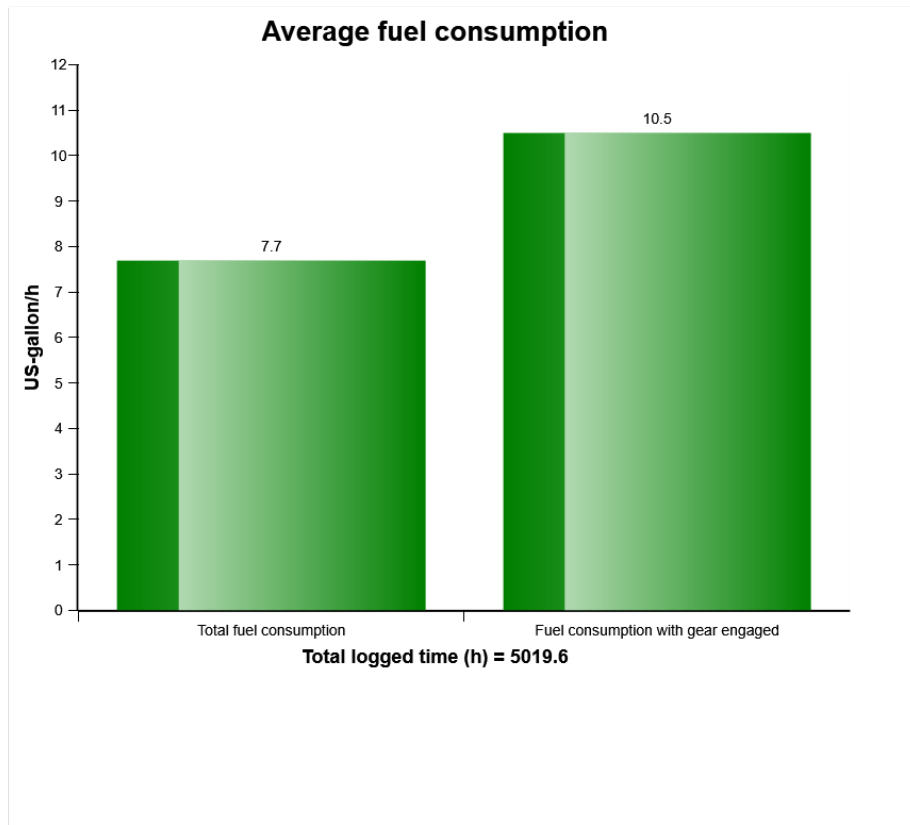
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A40G	342009	5066.6	30/09/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
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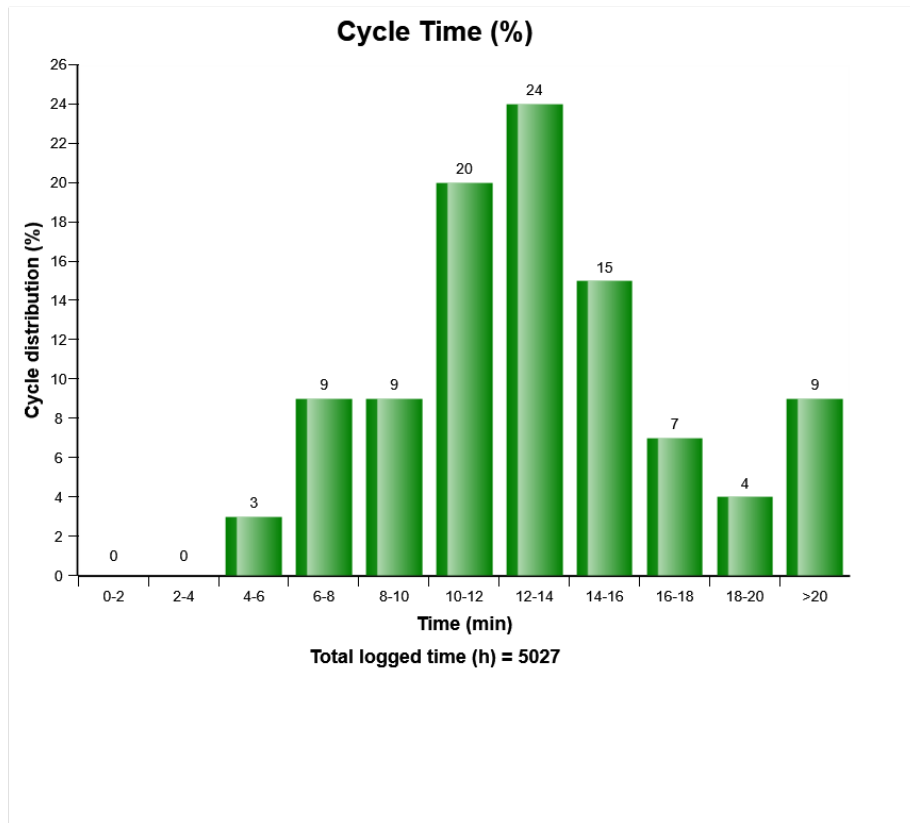


The diagram shows the total average fuel consumption versus average fuel consumption with gear engaged.

Big difference between the bars can indicate that the machine is not fully utilized, high idle lowers the total average fuel consumption.



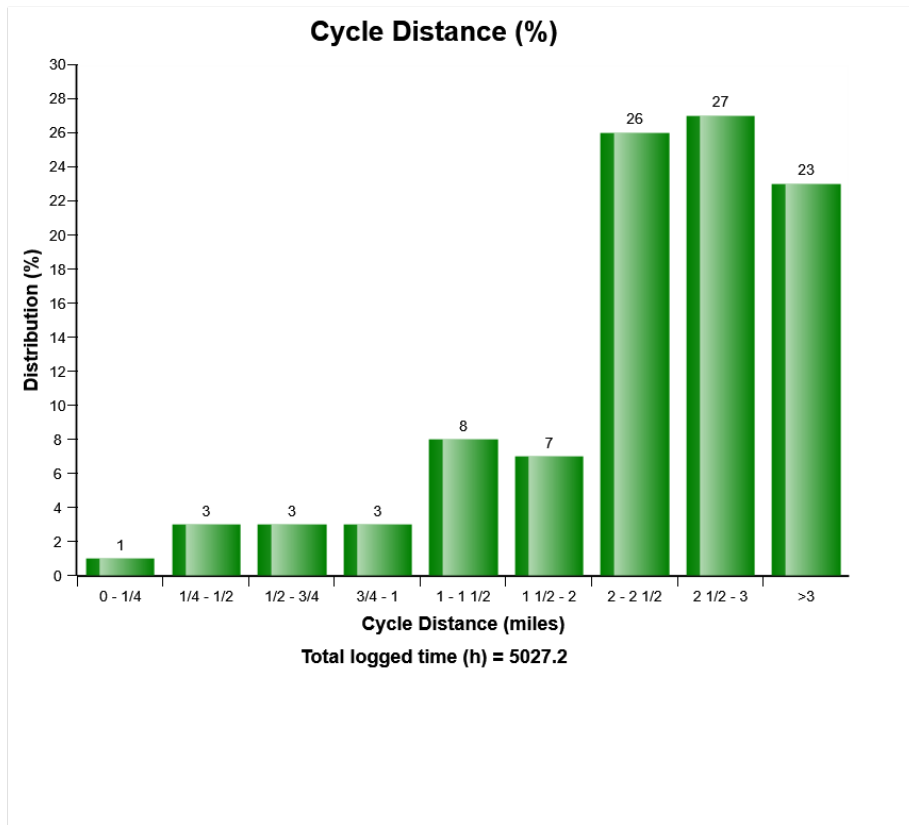
Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the distribution of the working cycle time. The time between 2 valid cycle registrations is registered. Time starts from lifting the body.



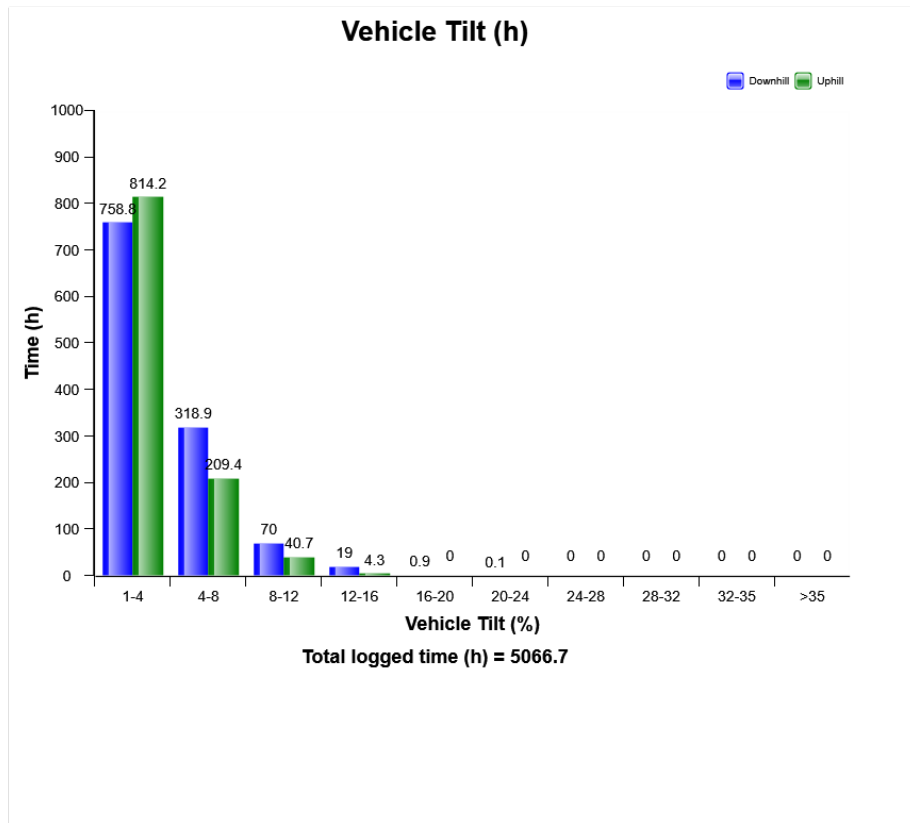
Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the distribution of the working cycle distance. The distance driven between 2 valid cycle registrations.



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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.



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

<b>Total logged time (h) =</b>
<b>Fuel consumption (US-gallons)</b>
<b>Production (ton,US)</b>
<b>Ton/h</b>
<b>Ton/gal</b>
<b>Fuel efficiency (US Gal/ton)</b>
<b>Number of cycles</b>
<b>Cycles overloaded (%)</b>
<b>Load utilisation / cycle (%)</b>

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.



1060.3

8907

178492

168.3

20.0

0.05

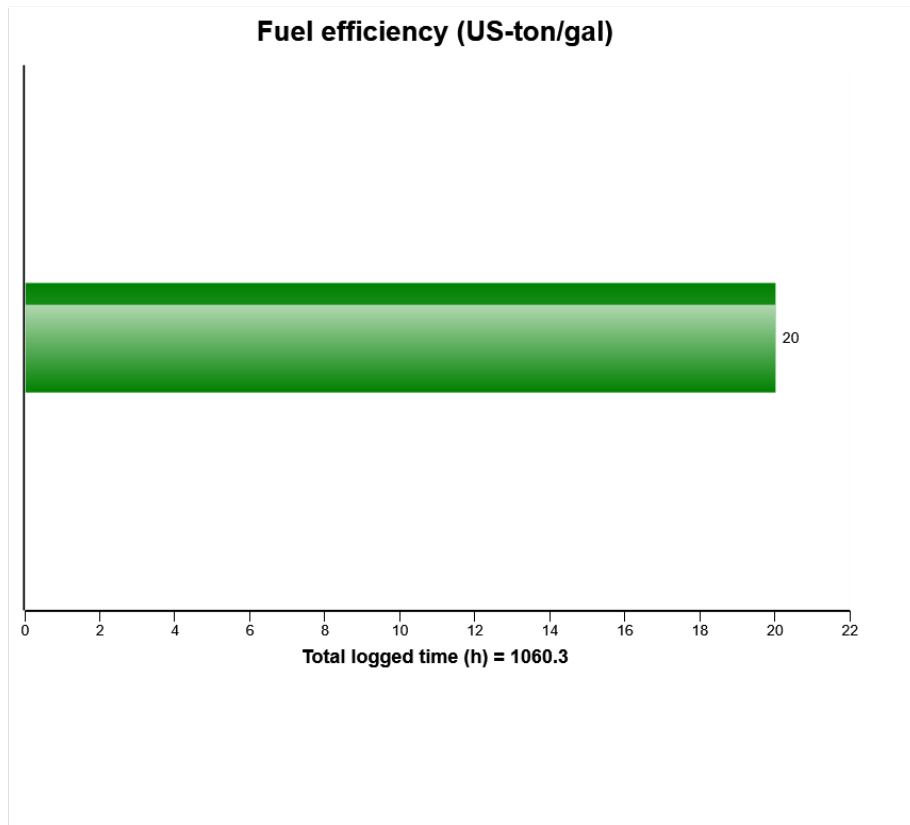
4139

33

100



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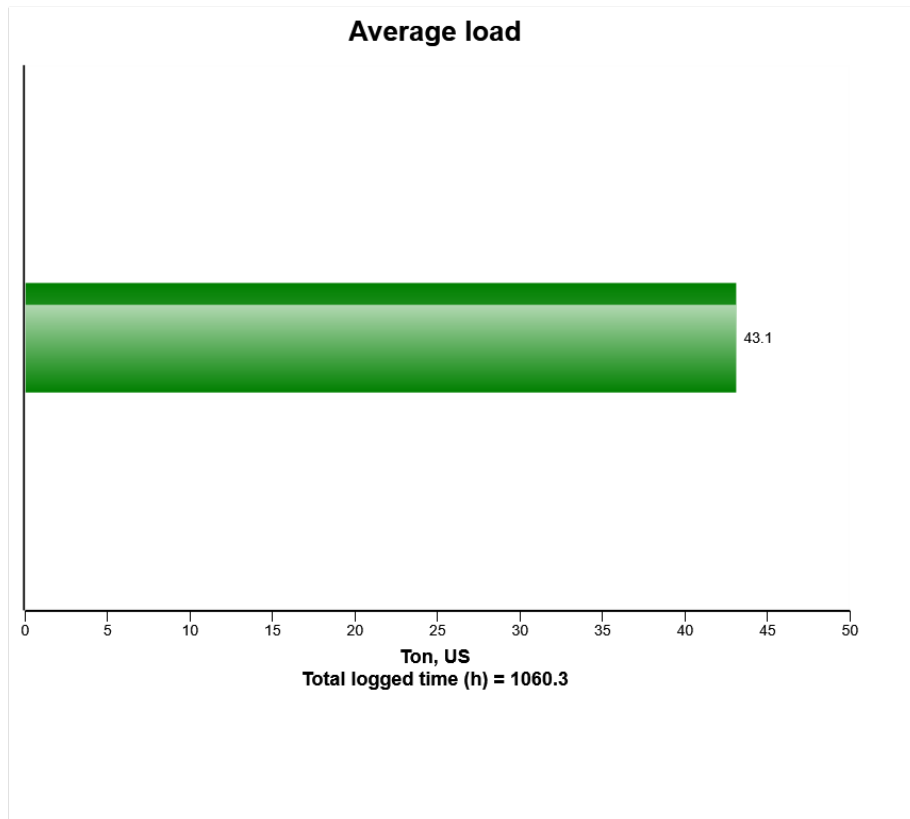


The presentation display the average produced tonne per fuel unit over the machines lifetime





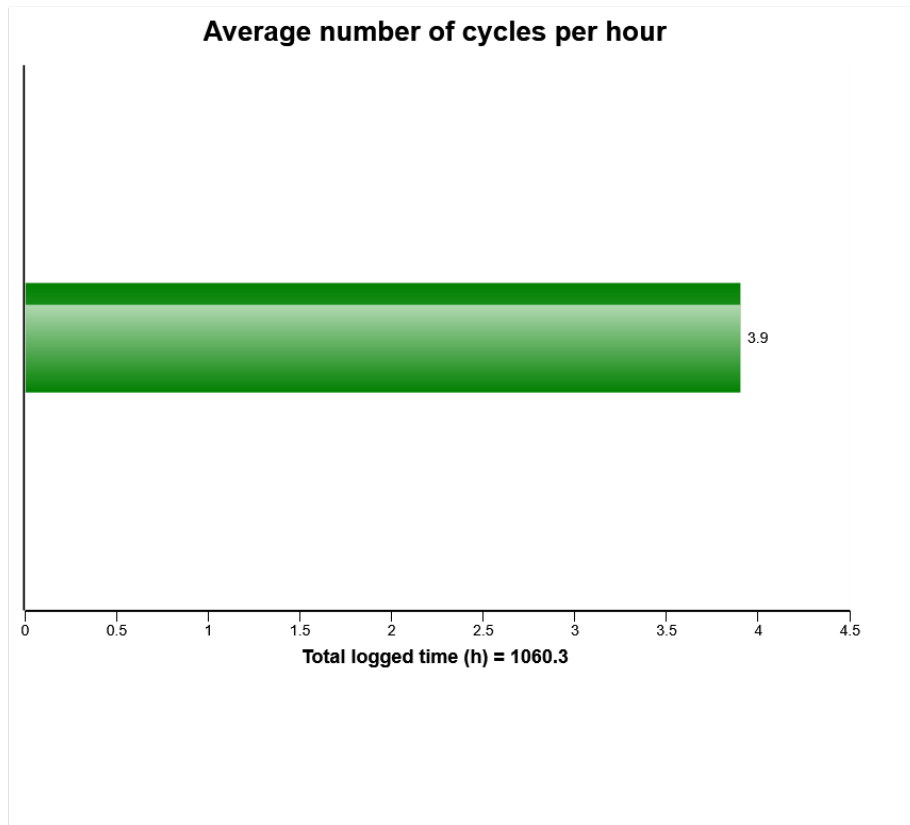
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An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
'WordSection1' is an unexpected token. The expected token is "" or ". Line 1, position 18.



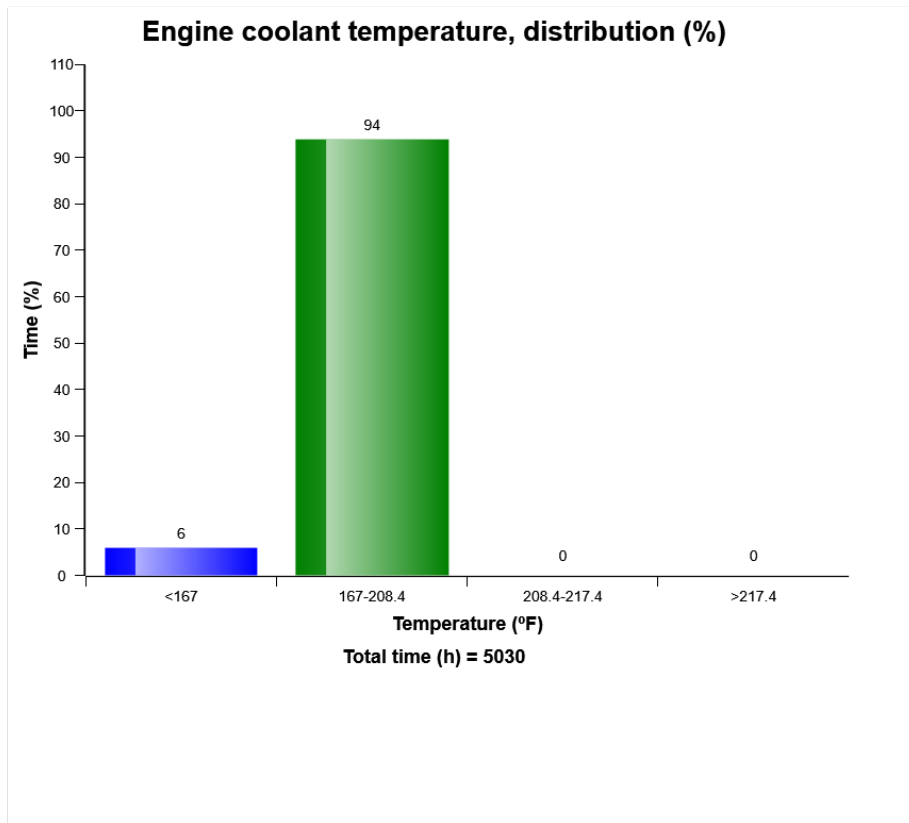
Machine model	SerialNo	Operating Hours	Reading Date
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The presentation shows the average number of cycles per hour over the machines lifetime.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



**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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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

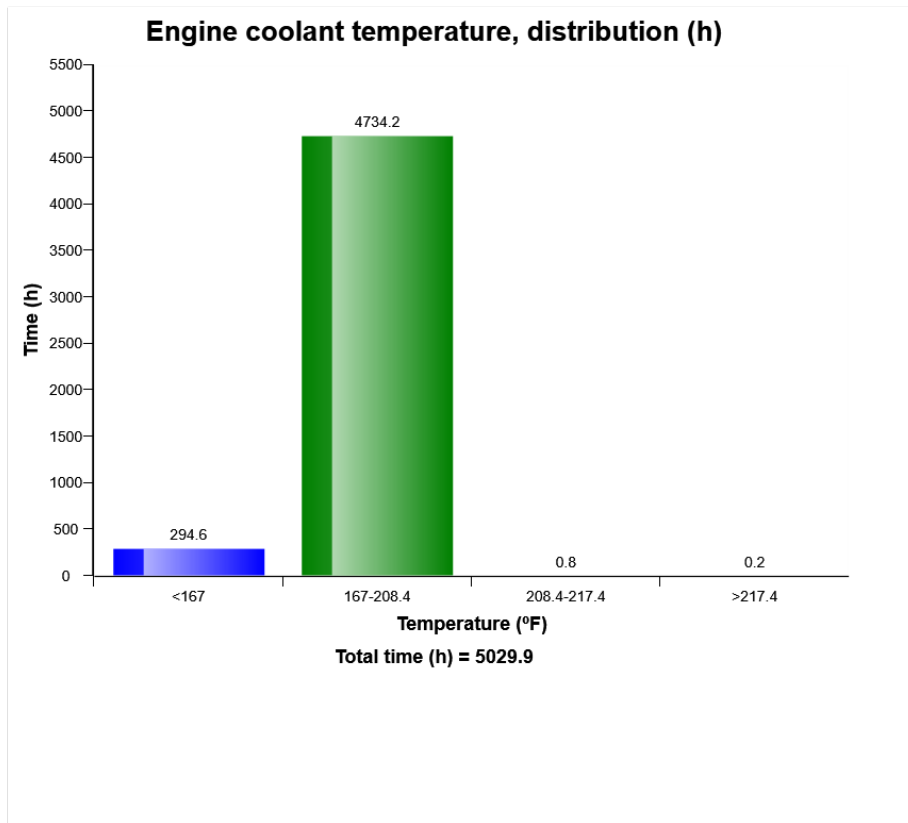
**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**Red bar** = Alarm.

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



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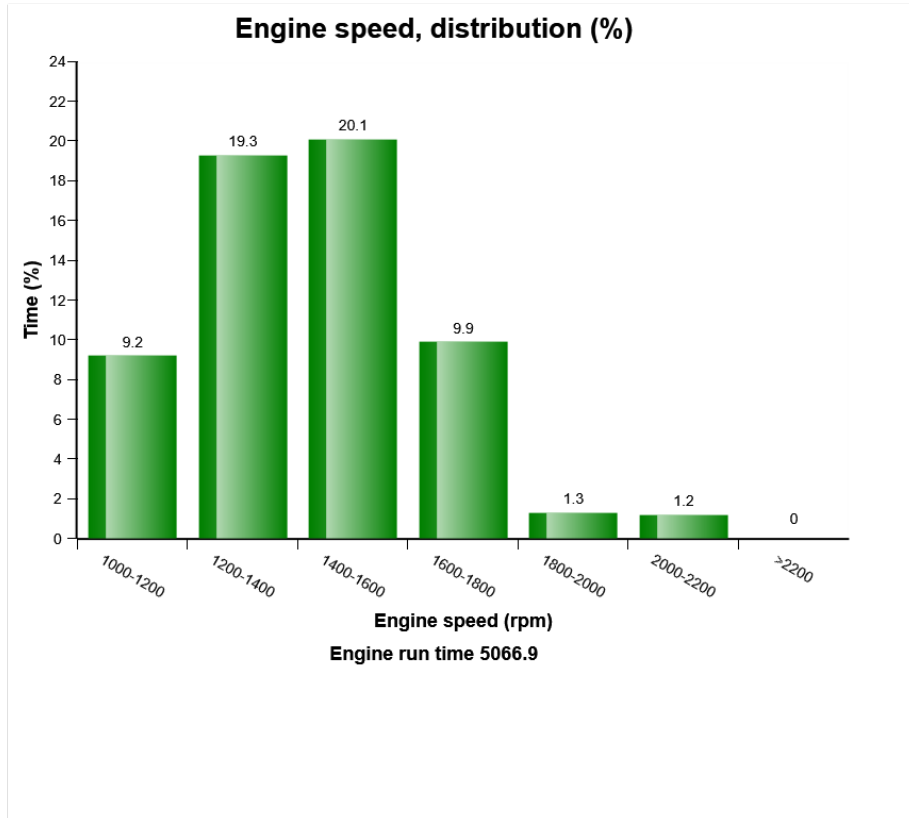
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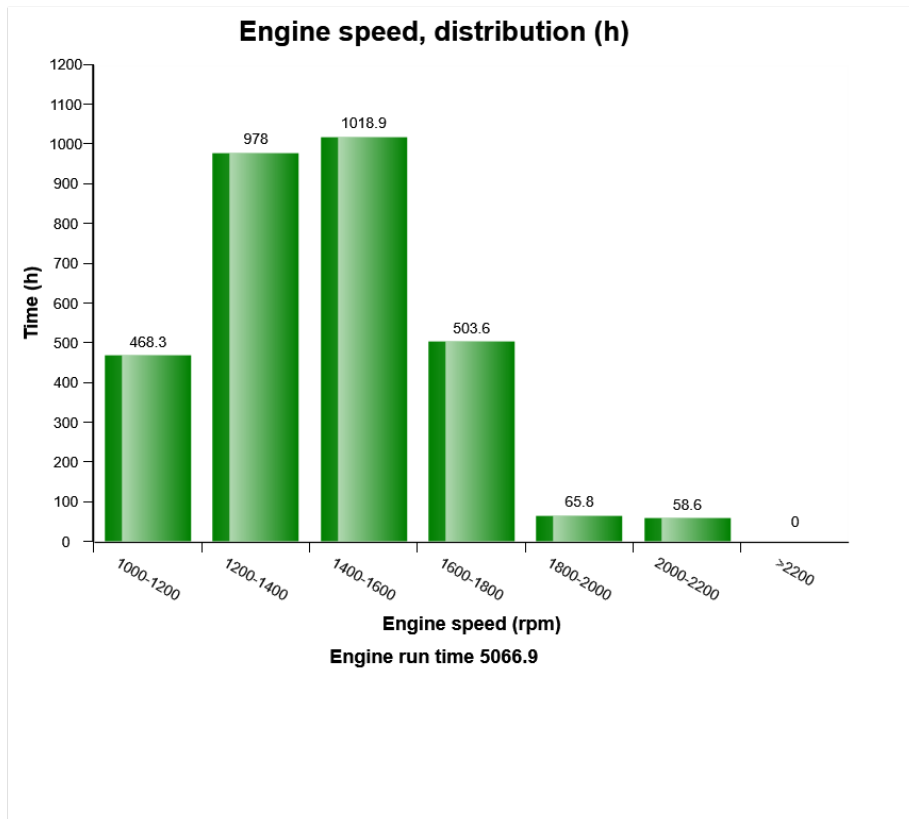
Machine model	SerialNo	Operating Hours	Reading Date
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An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
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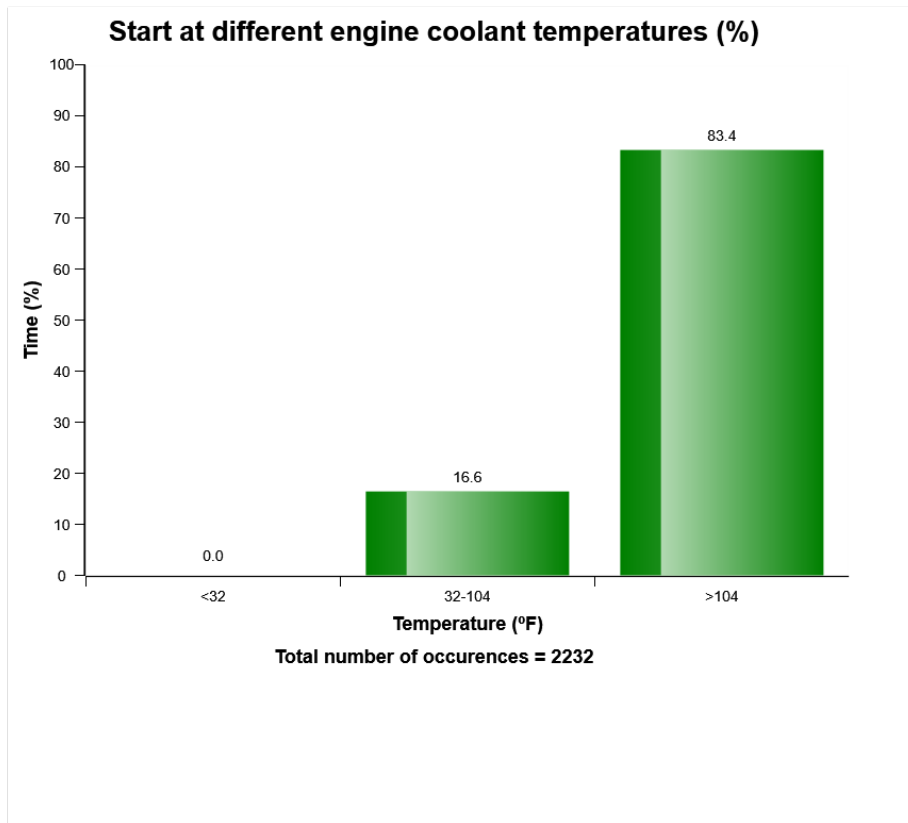


An error has occurred while processing HtmlTextBox 'htmlTextBox1':  
 'WordSection1' is an unexpected token. The expected token is '"' or "'". Line 1, position 18.





Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



**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.



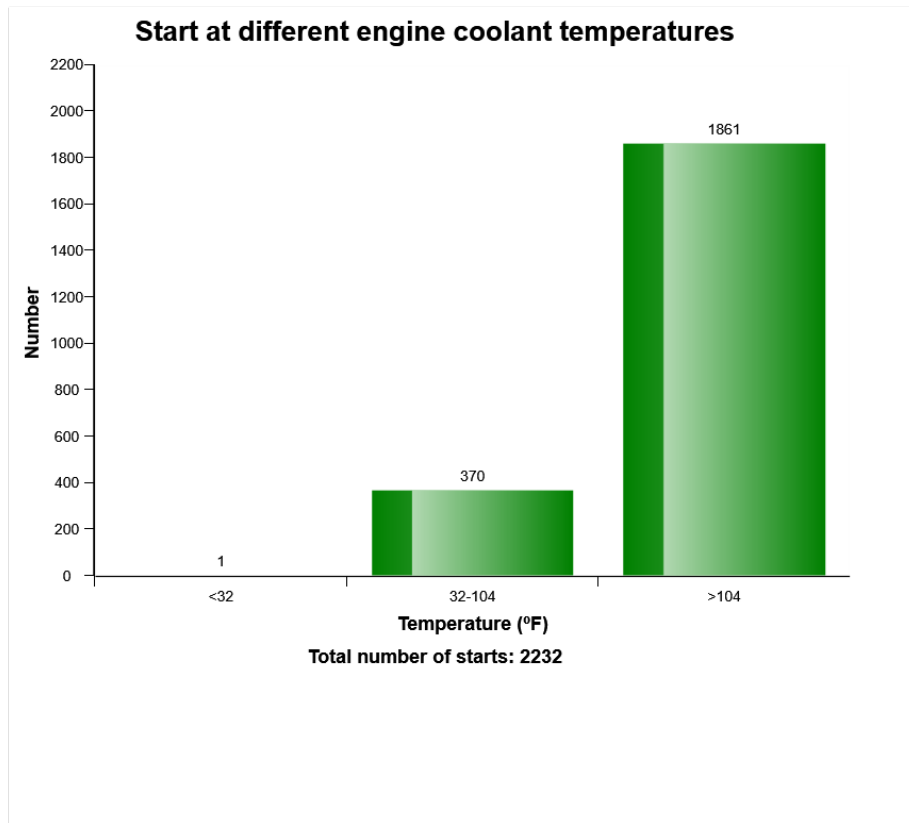
Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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.



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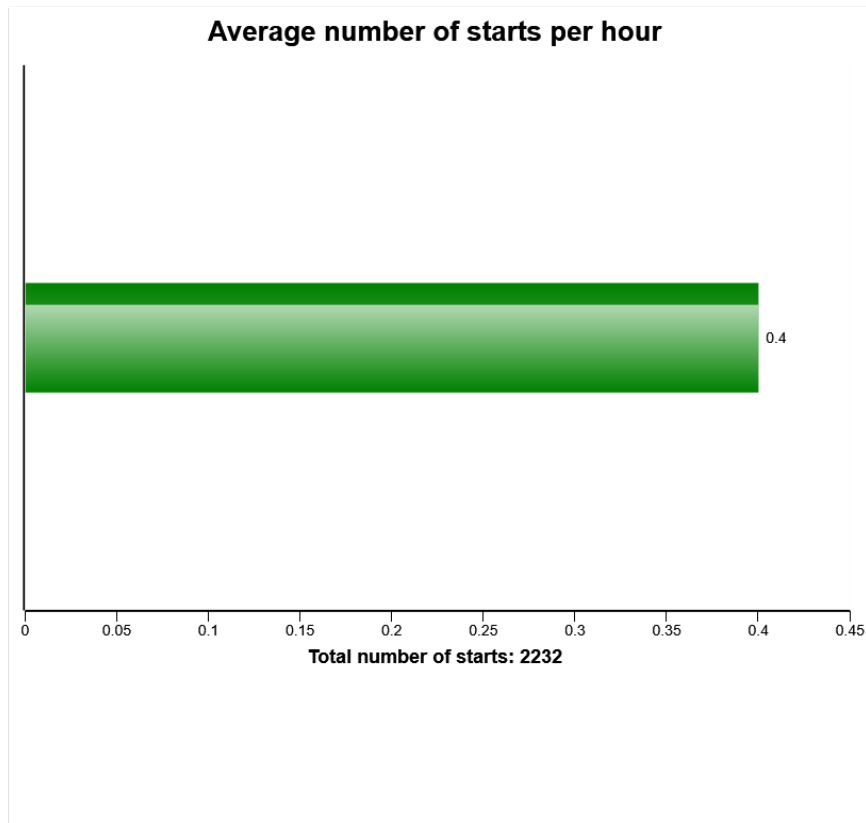
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Also see " *Number of starts / hour*" to get a complete picture of engine starting.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



**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."



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

Green bar = Number of average starts per hour



Machine model	SerialNo	Operating Hours	Reading Date
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**High engine coolant temperature  
Total number of occurrences = 6**

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)
<b>G</b>	0	2000	0	0	0	0	0
<b>H</b>	0	2000	0	0	0	0	0
<b>I</b>	0	2000	0	0	0	0	0
<b>J</b>	0	2000	0	0	0	0	0
<b>A</b>	4191	2018	4	26	1	20	9
<b>B</b>	4238	2018	5	2	13	25	28
<b>C</b>	4241	2018	5	3	6	30	143
<b>D</b>	4257	2018	5	5	6	29	135
<b>E</b>	4257	2018	5	5	6	33	256
<b>F</b>	4257	2018	5	5	6	38	19

**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.**



**Extreme (°  
F)**

32
32
32
32
222
226
233
239
231
226





Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

**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	342009	5066.6	30/09/2019

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

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

Definition :

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Extreme value :

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**Extreme (°  
F)**

32

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32

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32

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32

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32

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32

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32

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32

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32

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32

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Machine model	SerialNo	Operating Hours	Reading Date
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**Criteria :**

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**Regeneration duration**  
**Total number of occurrences = 260**

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
1013	2017	4	7	21	28	1
1013	2017	4	7	21	31	1
1013	2017	4	7	21	33	0
1013	2017	4	7	21	37	0
1013	2017	4	7	21	39	0
1013	2017	4	7	21	40	6
1048	2017	4	11	15	18	29
1051	2017	4	12	6	36	0
1057	2017	4	13	15	45	39
1057	2017	4	12	12	46	1
1057	2017	4	12	12	44	2
1058	2017	4	13	16	27	2
1058	2017	4	14	12	5	51
1559	2017	6	8	17	15	37
2063	2017	7	9	21	49	40
2563	2017	8	9	22	47	37
3064	2017	9	12	0	28	40
3570	2018	2	21	0	43	42
4075	2018	4	10	21	16	39
4576	2018	6	13	1	36	44

An error has occurred while processing HtmlTextBox 'ExplanationTxb':  
The 'span' start tag on line 1 position 43 does not match the end tag of 'BR'. Line 1, position 153.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
3999	2018	4	3	6	59	3	32.7
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0

**Definition :**

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**Duration :**

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**Extreme value :**

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**Criteria :**

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
5020	2019	2	6	20	5	1	20.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0
0	2000	0	0	0	0	0	0.0

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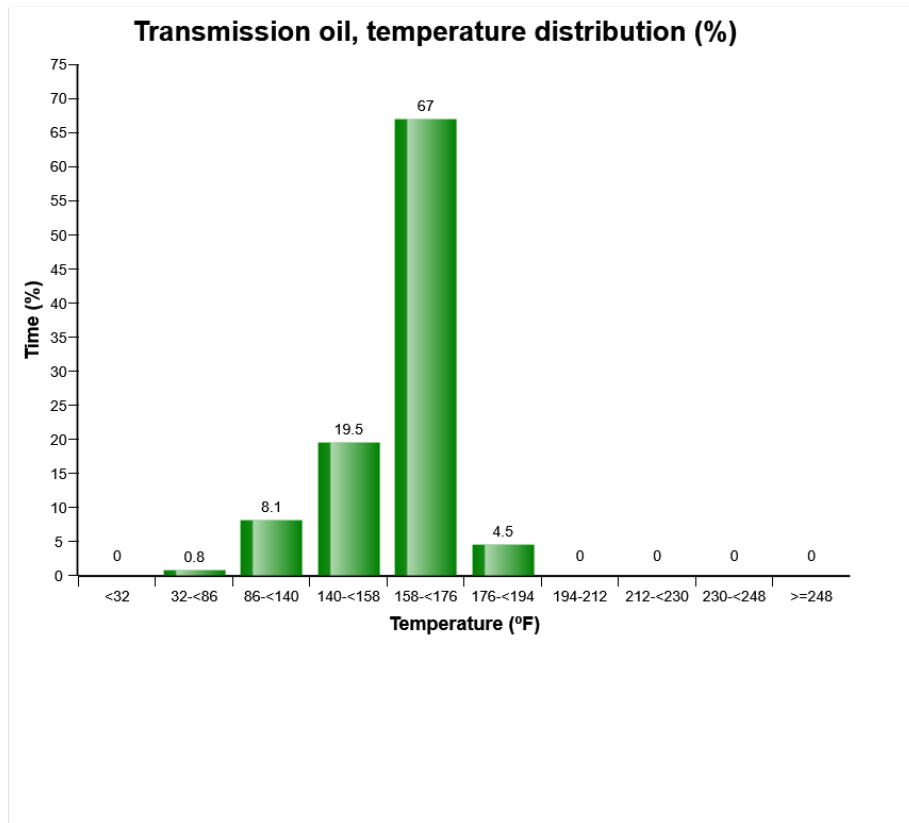
The extreme value column displays the most extreme value during the event.

**Criteria :**

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



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

<32°F Temperatures below 32°F

32-<86°F Temperatures from 32°F until 86°F

86-<140°F Temperatures from 86°F until 140°F

140-<158°F Temperatures from 140°F until 158°F

158-<176°F Temperatures from 158°F until 176°F

176-<194°F Temperatures from 176°F until 194°F

194-<212°F Temperatures from 194°F until 212°F



Machine model	SerialNo	Operating Hours	Reading Date
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212-<230°F Temperatures from 212°F until 230°F

230-<248°F Temperatures from 230°F until 248°F

>248°F Temperatures over 248°F

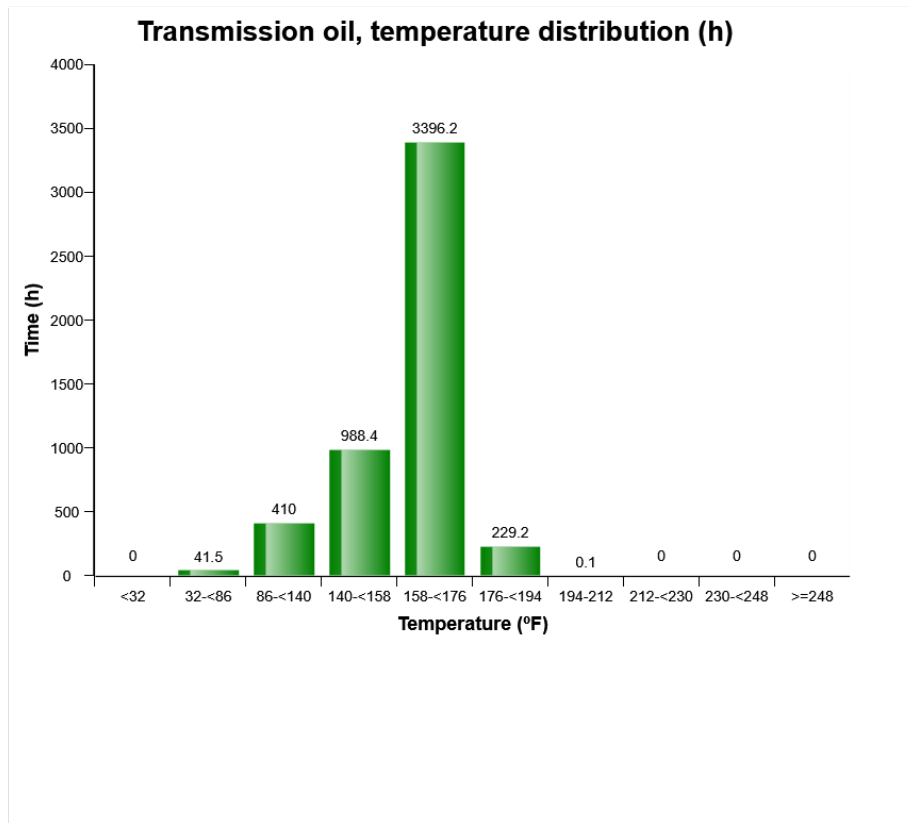
The bar that describes temperatures from 230°F until 248°F is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

The bar that describes >248°F is red and means that the oil has been overheated. Driver has been given red central warning.

Oil temperatures exceeding 230°F must be avoided since the properties of the oil are degraded



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<32°F Temperatures below 32°F

32-<86°F Temperatures from 32°F until 86°F

86-<140°F Temperatures from 86°F until 140°F

140-<158°F Temperatures from 140°F until 158°F

158-<176°F Temperatures from 158°F until 176°F

176-<194°F Temperatures from 176°F until 194°F

194-<212°F Temperatures from 194°F until 212°F



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

212-<230°F Temperatures from 212°F until 230°F

230-<248°F Temperatures from 230°F until 248°F

>248°F Temperatures over 248°F

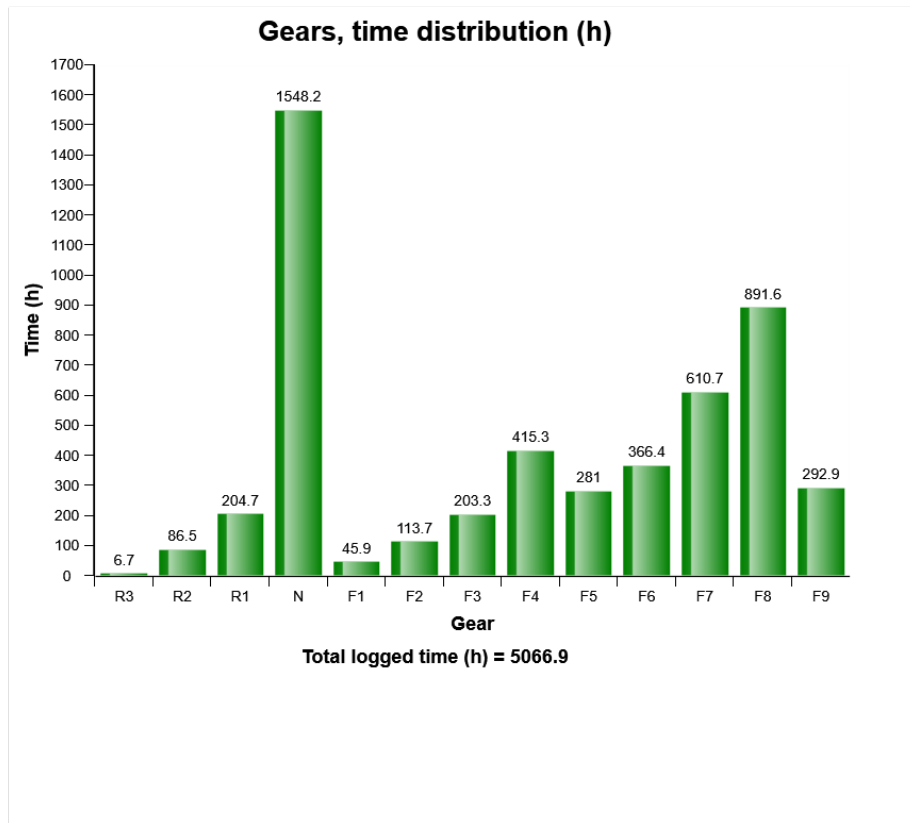
The bar that describes temperatures from 230°F until 248°F is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

The bar that describes >248°F is red and means that the oil has been overheated. Driver has been given red central warning.

Oil temperatures exceeding 230°F must be avoided since the properties of the oil are degraded



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



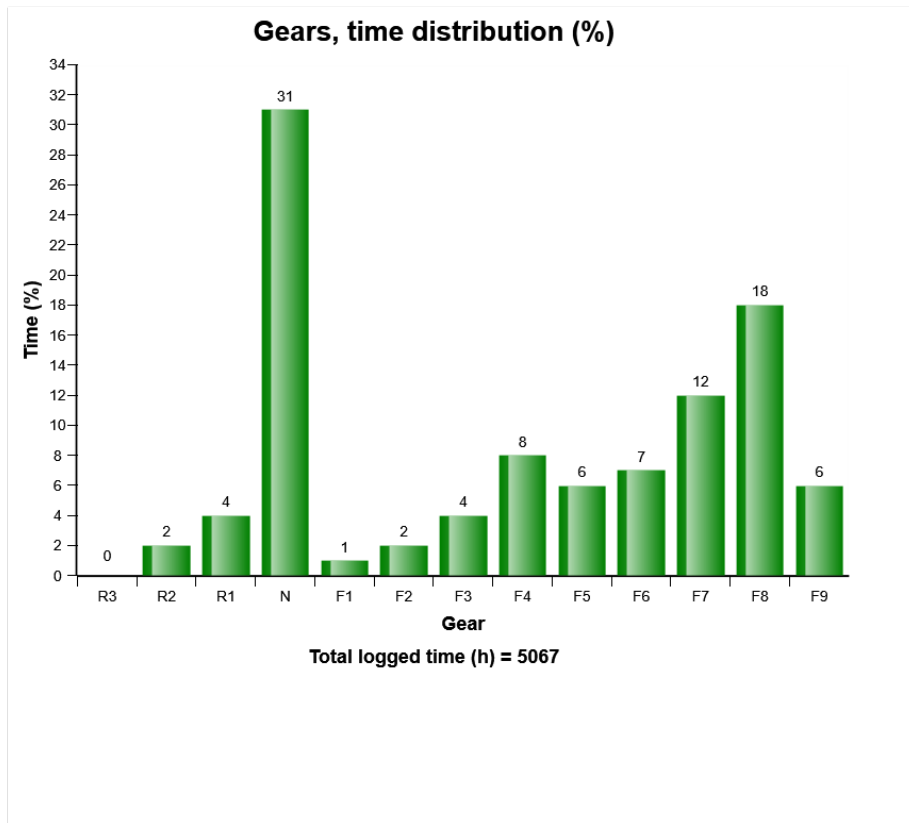
The diagram shows the time for each gear. Each bar represents a gear.

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





Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

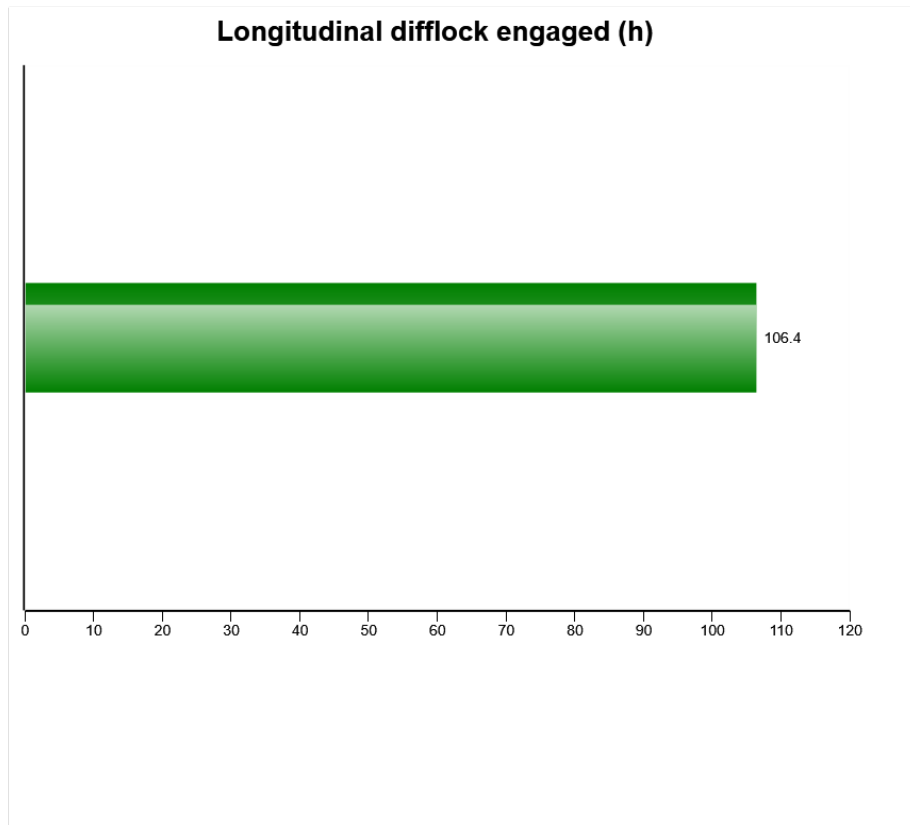


The diagram shows the time for each gear. Each bar represents a gear.

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



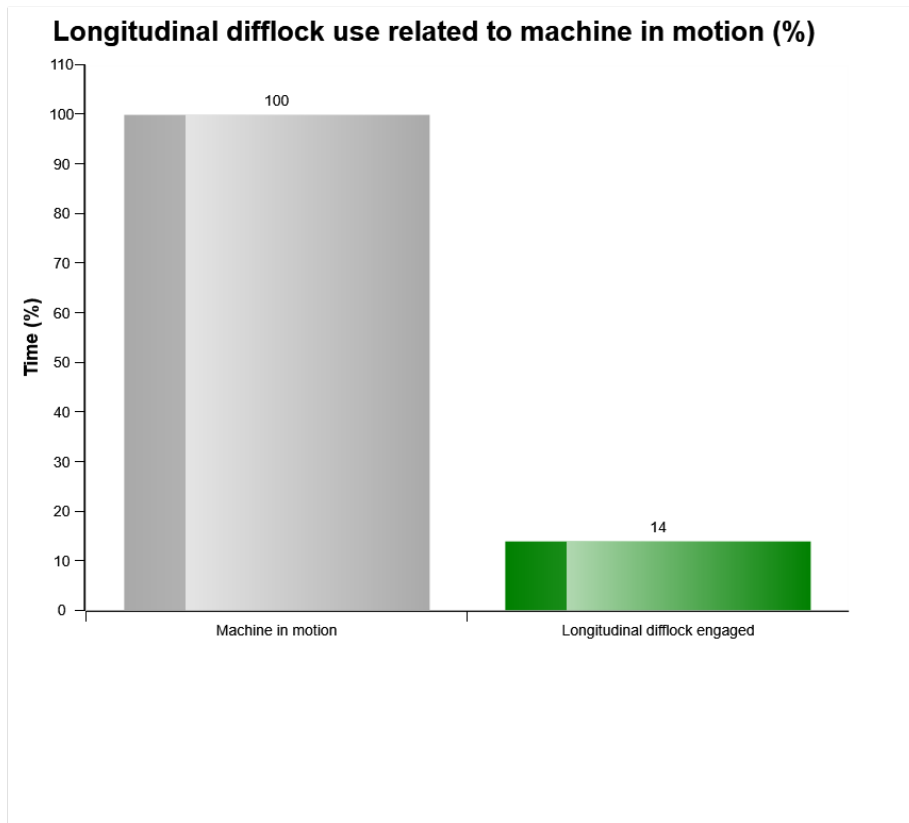
Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



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	342009	5066.6	30/09/2019



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

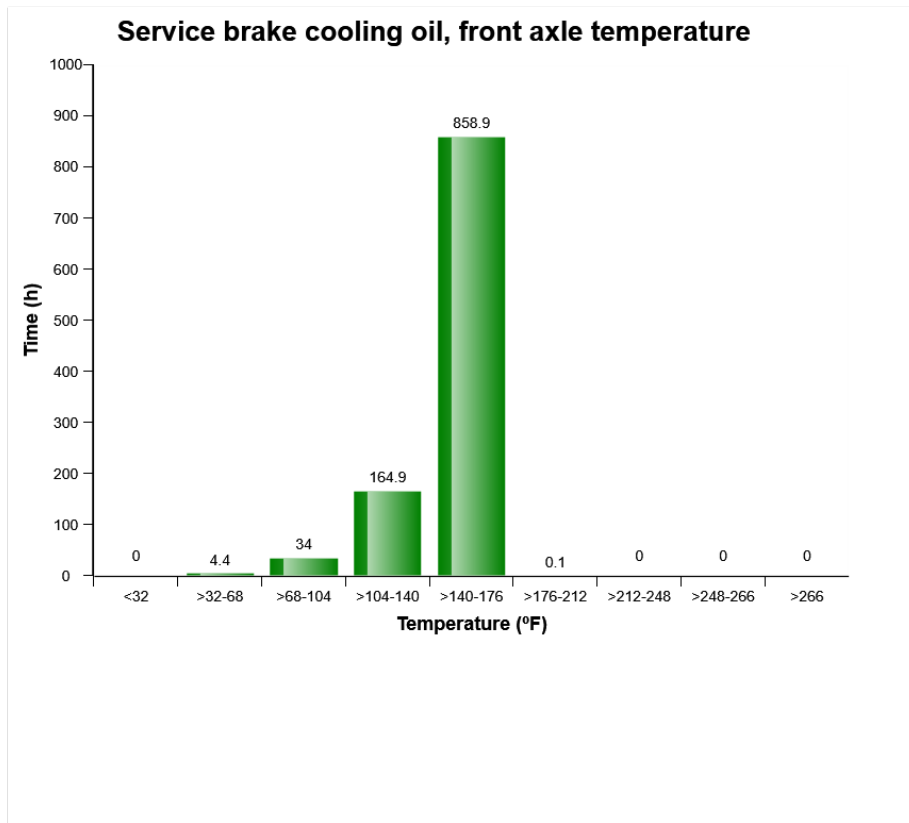
The longitudinal difflock should always be disengaged when not needed to reduce wear.

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	342009	5066.6	30/09/2019

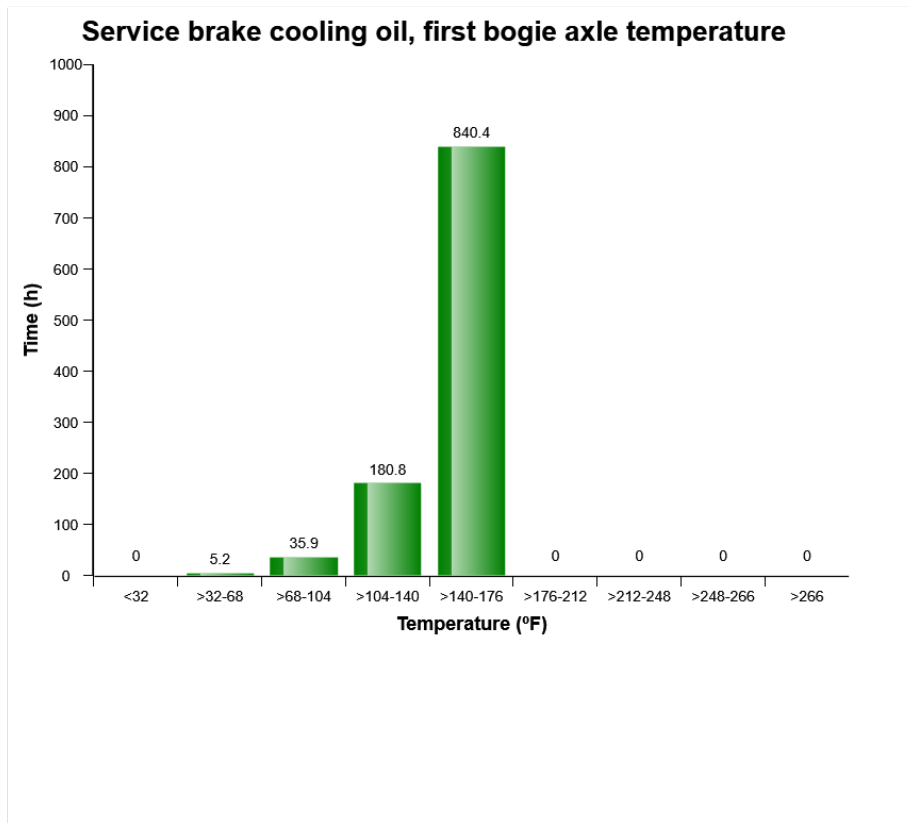


The diagram shows the front axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the front axle to the oil cooler, that is, the warmest oil in the circuit.

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	342009	5066.6	30/09/2019

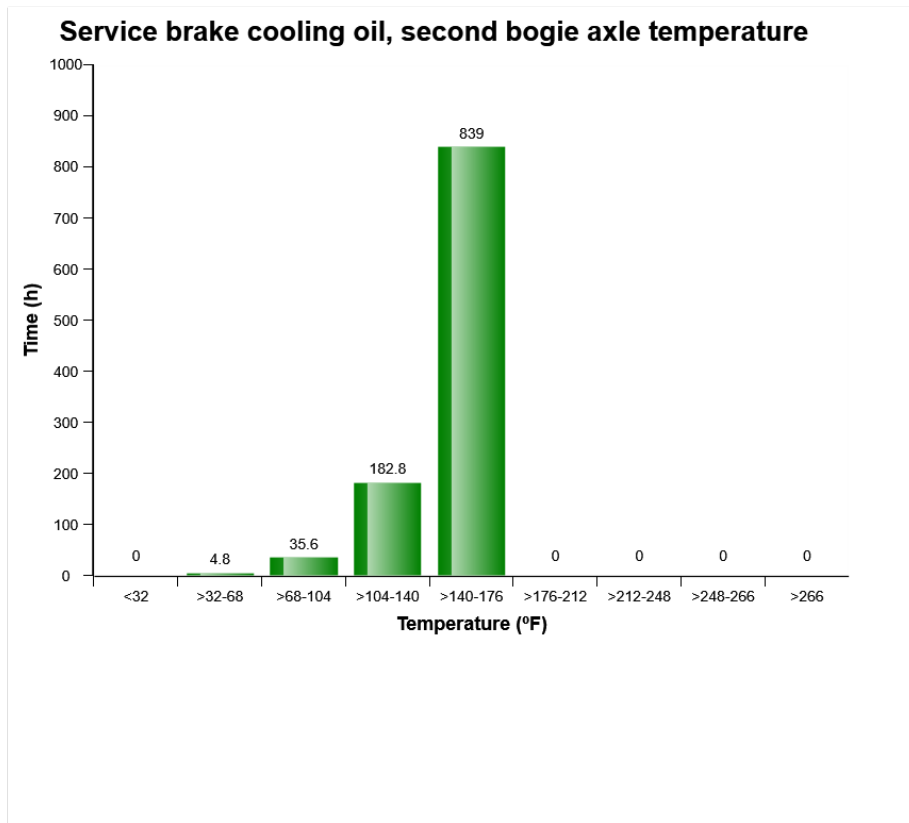


The diagram shows the first bogie axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the first bogie axle to the oil cooler, that is, the warmest oil in 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	342009	5066.6	30/09/2019

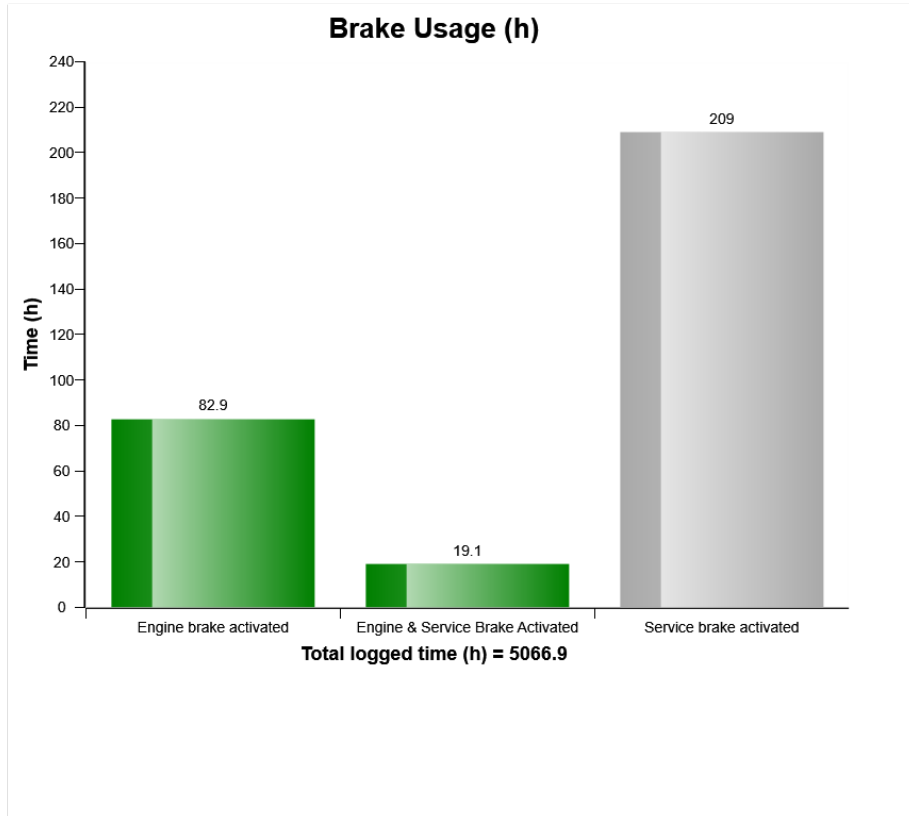


The diagram shows the front axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the second bogie axle to the oil cooler, that is, the warmest oil in the circuit.

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.



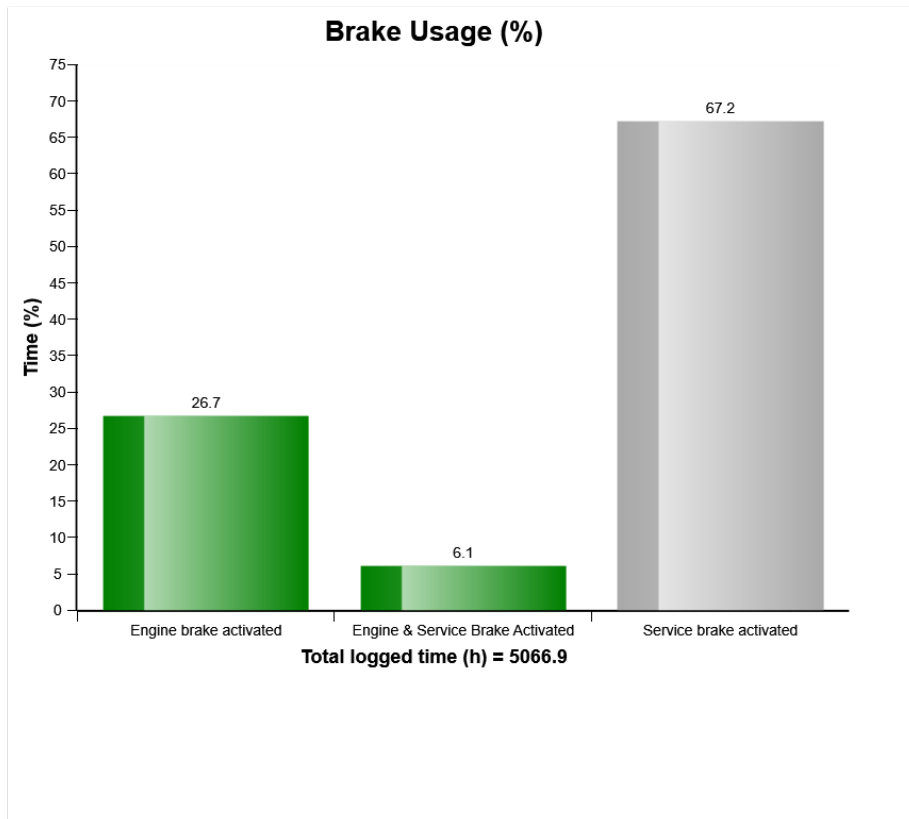
Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



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	342009	5066.6	30/09/2019



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	342009	5066.6	30/09/2019

**Low Brake Servo Pressure**  
**Total number of occurrences = 4**

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)
<b>E</b>	0	2000	0	0	0	0	0
<b>F</b>	0	2000	0	0	0	0	0
<b>G</b>	0	2000	0	0	0	0	0
<b>H</b>	0	2000	0	0	0	0	0
<b>I</b>	0	2000	0	0	0	0	0
<b>J</b>	0	2000	0	0	0	0	0
<b>A</b>	4176	2018	4	20	12	34	3
<b>B</b>	4521	2018	5	27	6	5	1
<b>C</b>	4856	2018	7	2	15	32	4
<b>D</b>	4881	2018	7	24	10	57	4

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.**



**Extreme  
(psi)**

0
0
0
0
0
0
1736
2083
1698
1605



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

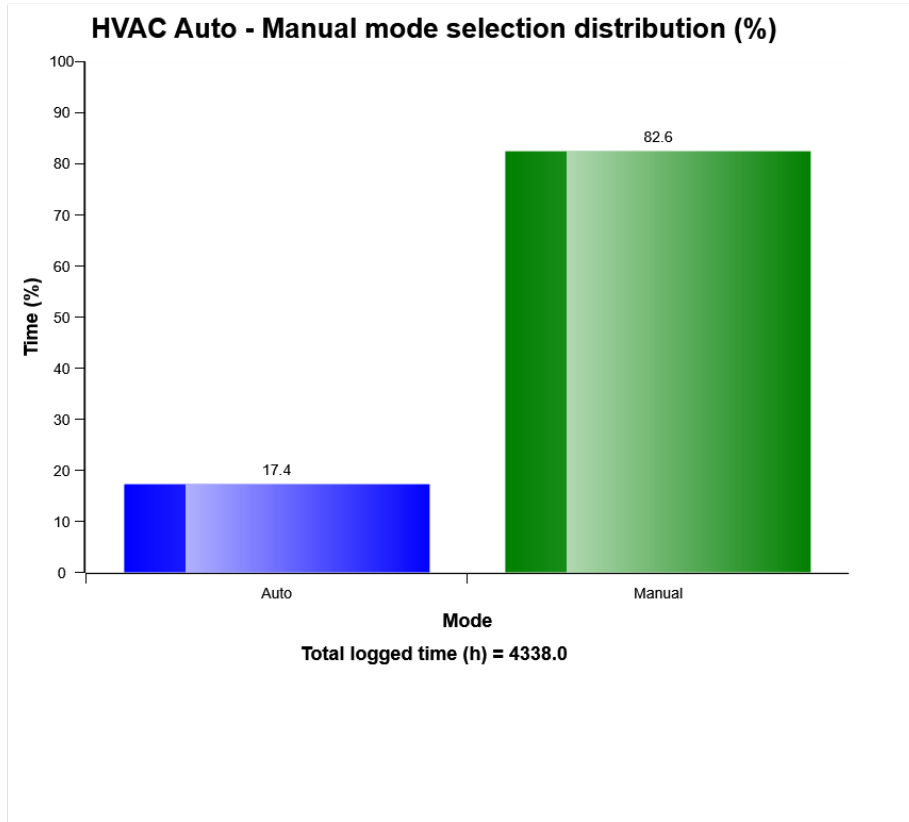
**Criteria :**

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	342009	5066.6	30/09/2019



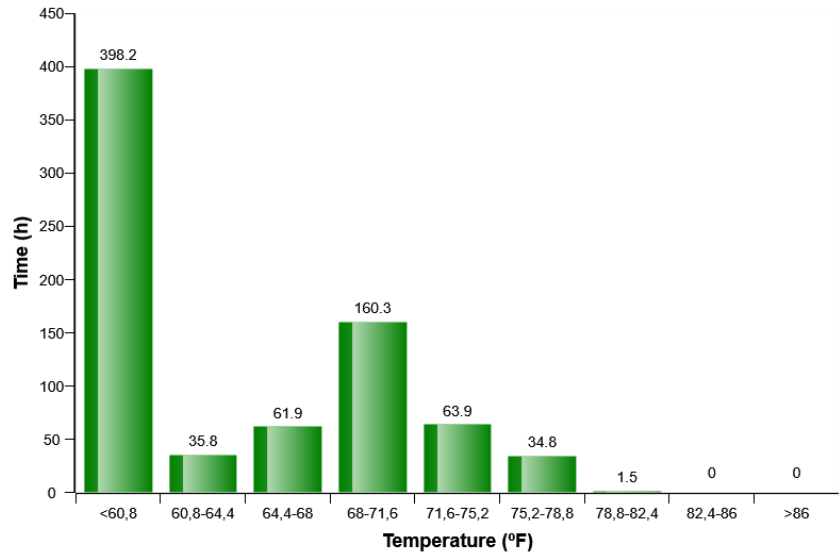
**Definition:**

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	342009	5066.6	30/09/2019

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

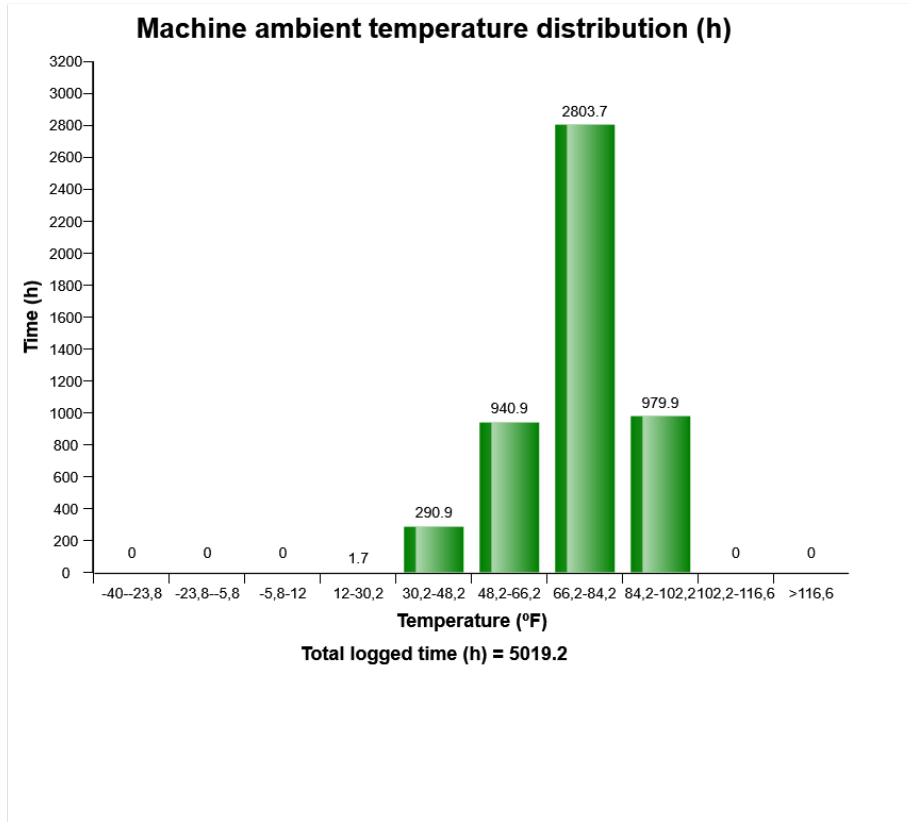


**Definition:**

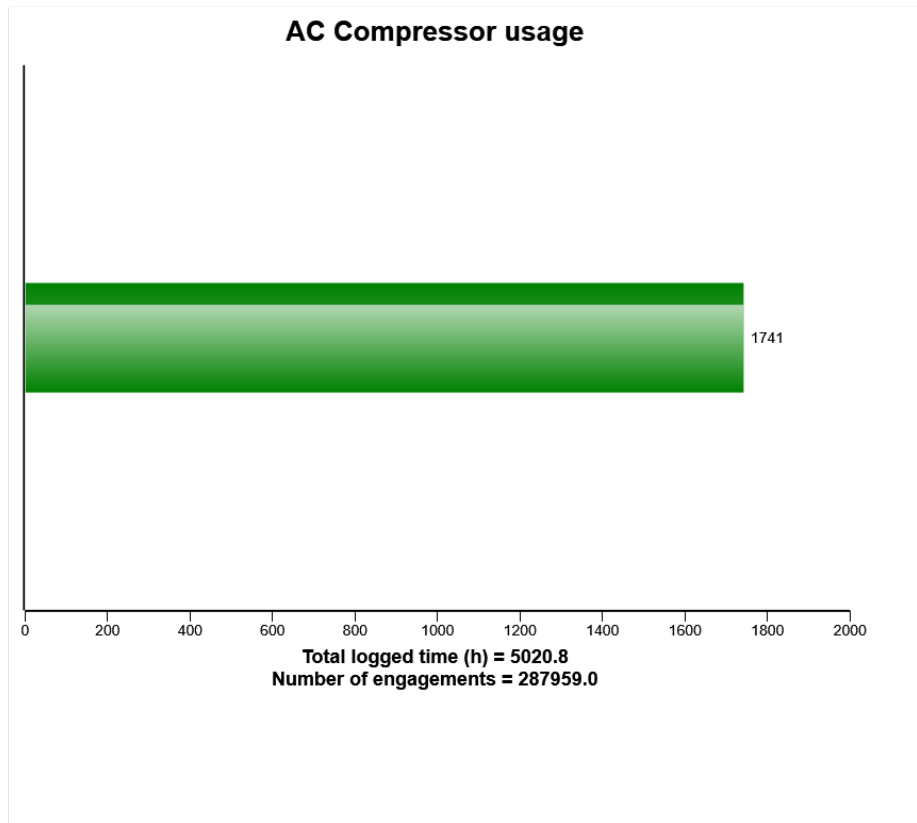
The diagram describes air temperature setting distribution for HVAC auto control mode established by operator in Cabin



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



**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.

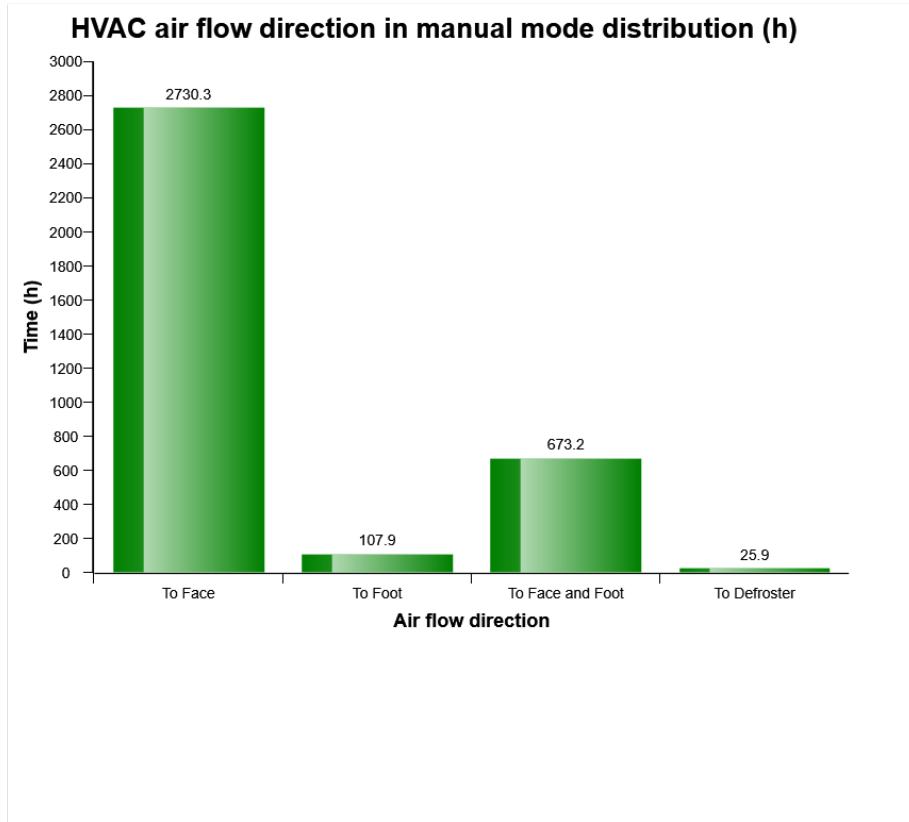




Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

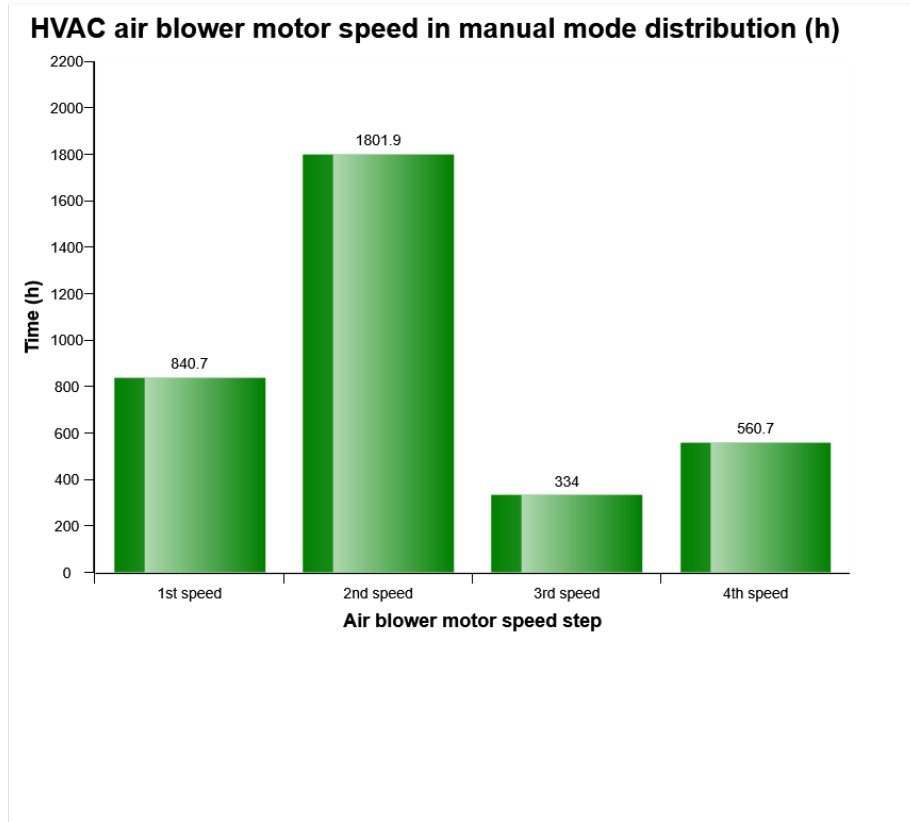


**Definition:**

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	342009	5066.6	30/09/2019



**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	342009	5066.6	30/09/2019

**AC High Pressure**  
**Total number of occurrences = 483**

Op hours	Year	Month	Day	Hours	Minute	Duration (sec)	Extreme (° F)
4995	2018	8	28	18	12	35	91
4995	2018	8	28	18	27	21	91
4996	2018	8	28	19	33	8	86
4996	2018	8	28	19	20	13	88
4996	2018	8	28	18	40	18	91
4996	2018	8	28	18	54	21	90
4996	2018	8	28	19	7	21	88
5000	2018	8	28	23	36	12	81
5001	2018	8	28	23	49	3	81
5009	2018	8	29	12	39	18	95
5011	2018	8	29	14	14	8	97
5013	2018	8	29	16	25	26	99
5013	2018	8	29	16	40	41	97
5014	2018	8	29	17	15	20	95
5014	2018	8	29	18	1	20	95
5014	2018	8	29	17	44	28	95
5014	2018	8	29	17	31	16	95
5015	2018	8	29	18	48	13	90
5015	2018	8	29	18	16	18	93
5038	2018	9	5	9	11	14	86

**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	342009	5066.6	30/09/2019

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	342009	5066.6	30/09/2019

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

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° F)
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32
0	2000	0	0	0	0	0	32

**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	342009	5066.6	30/09/2019

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	342009	5066.6	30/09/2019

**AC System Cut Out Pressure**  
**Total number of occurrences = 33**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° F)
105	2017	3	1	6	6	-46521	64
110	2017	3	1	11	30	15235	79
115	2017	3	1	16	6	6692	77
117	2017	3	1	18	6	3898	72
118	2017	3	1	19	16	9879	72
120	2017	3	1	22	5	72520	68
122	2017	3	2	0	6	4134	70
124	2017	3	2	1	19	179	61
124	2017	3	2	6	11	3355	59
124	2017	3	2	1	33	19	61
125	2017	3	2	8	4	-41823	52
131	2017	3	2	14	42	1934	61
132	2017	3	2	16	5	7044	55
132	2017	3	2	15	23	345	55
134	2017	3	2	18	5	10470	57
137	2017	3	2	21	3	87946	48
143	2017	3	3	6	0	-43764	36
149	2017	3	3	12	9	5607	54
151	2017	3	3	13	59	1146	52
4724	2018	6	19	18	6	11	99

**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	342009	5066.6	30/09/2019

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 :**

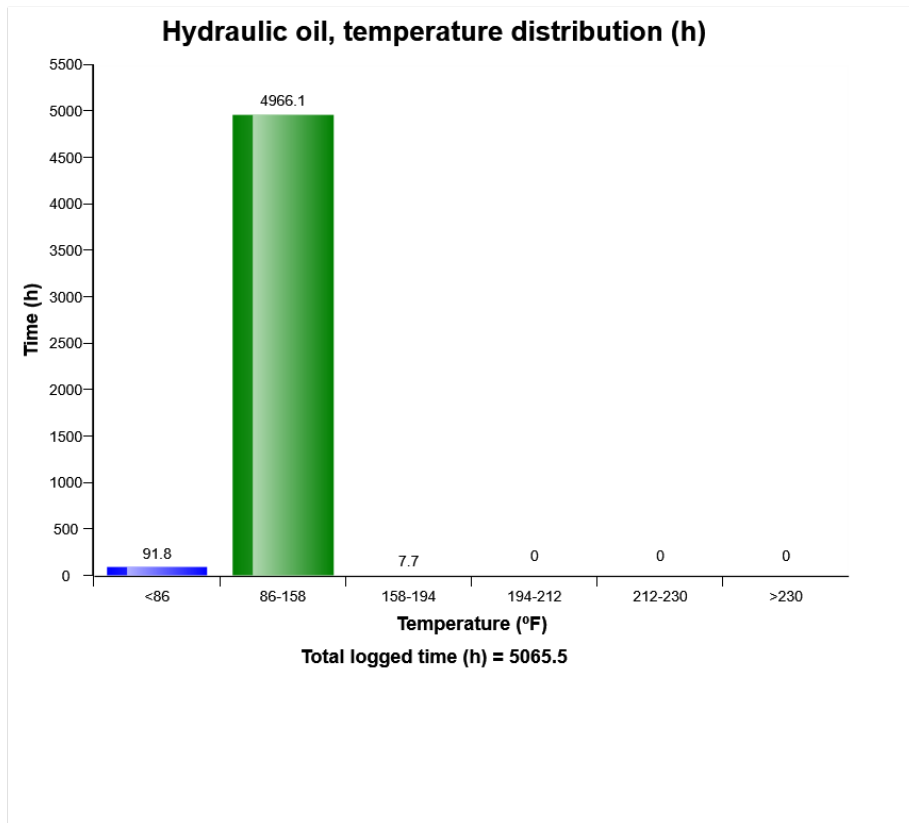
The extreme value column displays the most extreme value during the event.

**Criteria :**

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019



**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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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

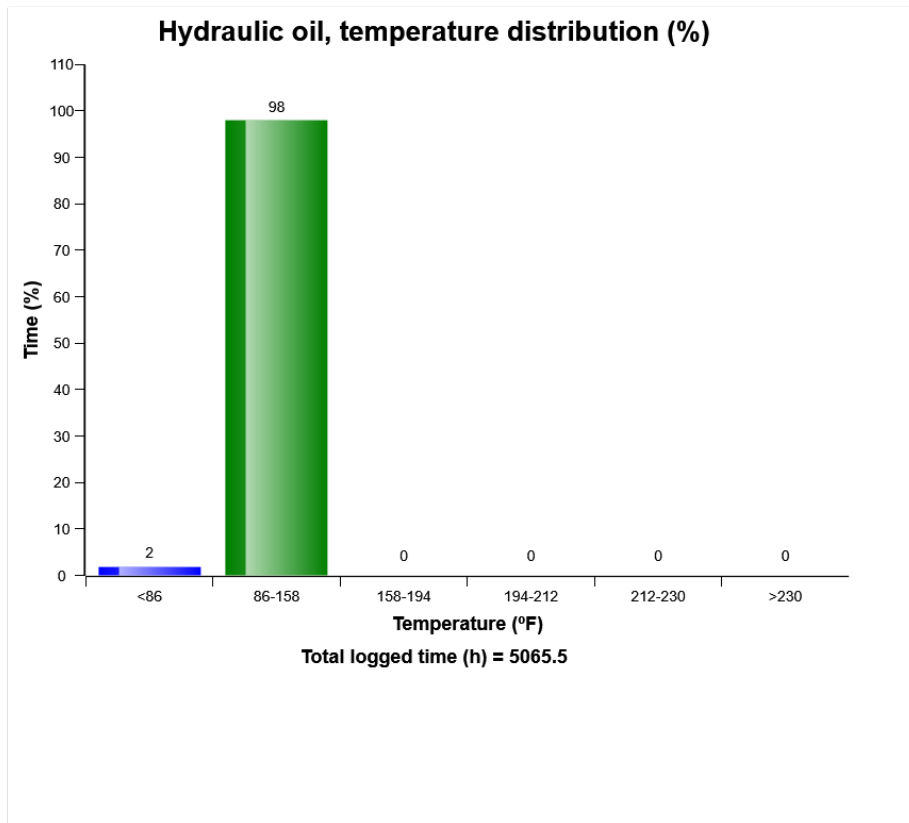
**Yellow bar** = High working temperature. It is normal to have some registrations in this region.

**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	342009	5066.6	30/09/2019



**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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	342009	5066.6	30/09/2019

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

**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.

