

VOLVO CONSTRUCTION EQUIPMENT MATRIS REPORT

Machine model A40G	SerialNo 341419	Operating Hours 7716.8	Reading Date 2/4/2019
Company name ALTA EQUIPMENT COMPANY	Dealer	Report Issuer	
Contact name	Technician Anthony Messina	Primary Application Earth moving construction	
Site	Workorder swo220429	Ground Condition	

MATRIS Reading, Summary / Recommendation

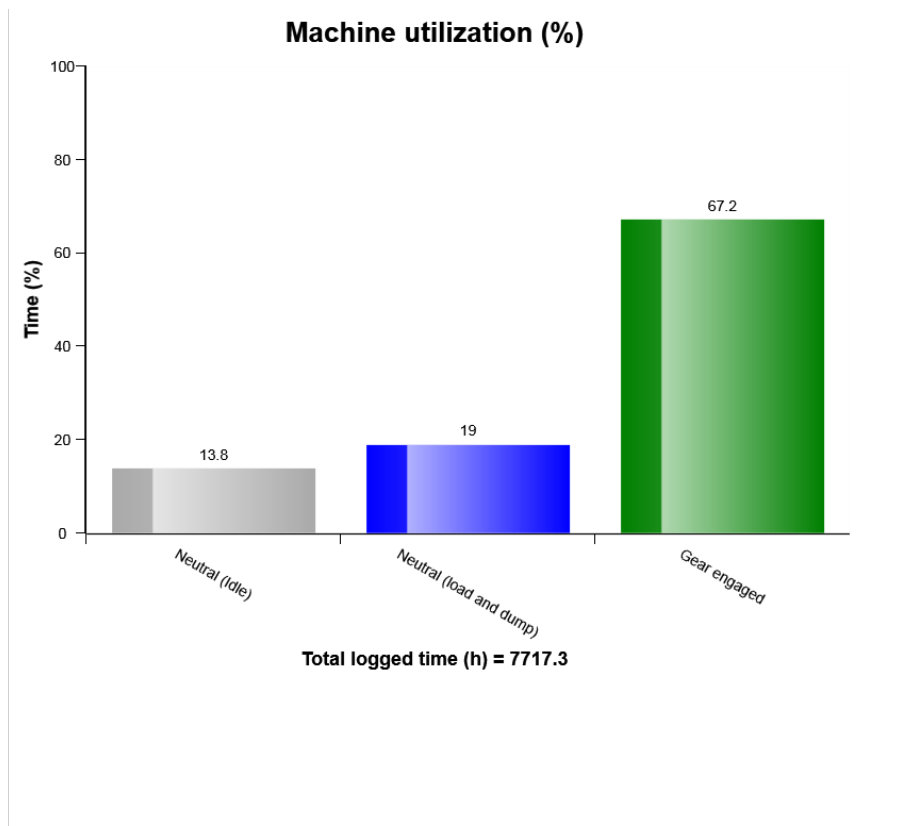


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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	341419	7716.8	2/4/2019



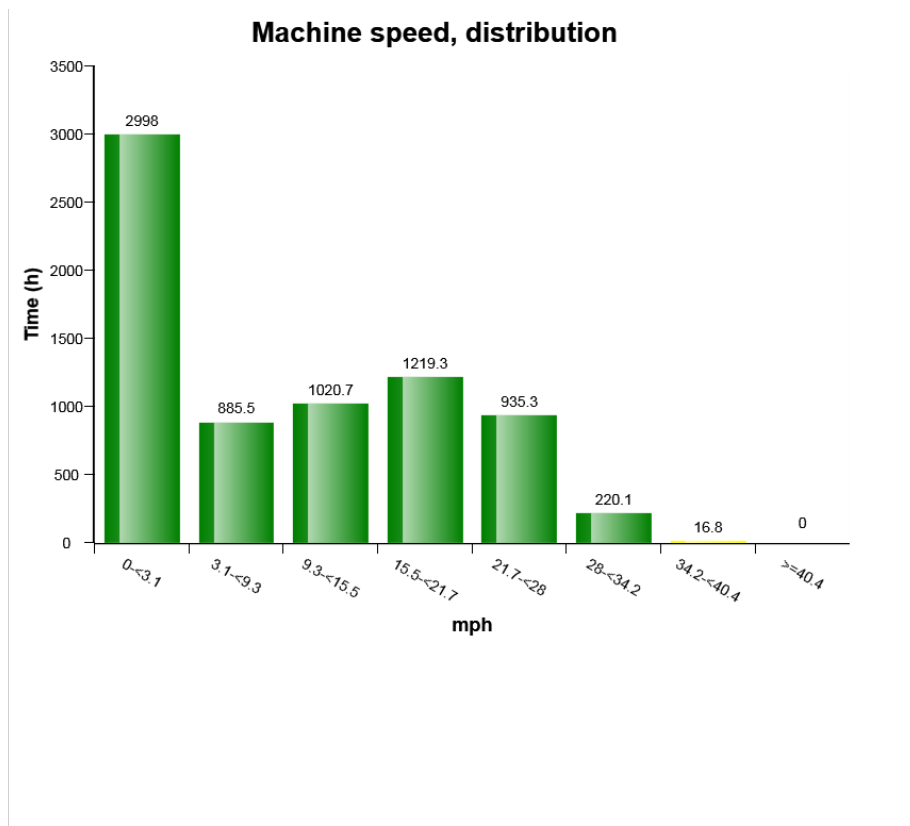
The diagram shows a simplified presentation of the machines utilization based on the relation between time in gear and time in neutral. The "Gear engaged " includes both forward and reverse gears.

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	341419	7716.8	2/4/2019

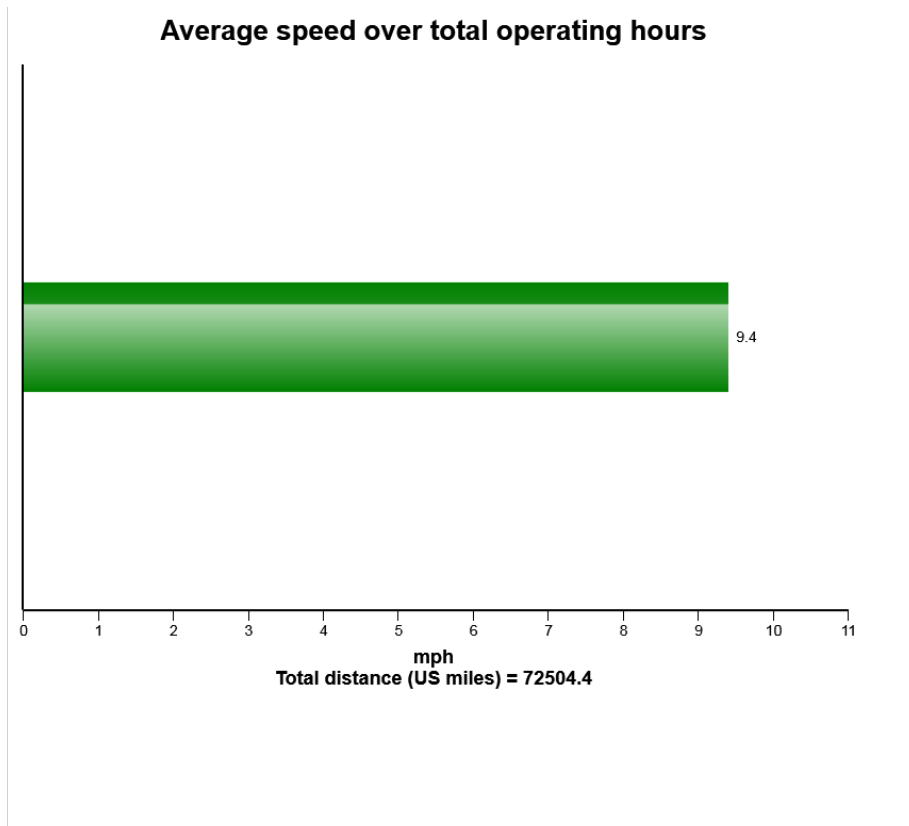


The presentation shows the time in hours in speed-intervals for the machine.

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"



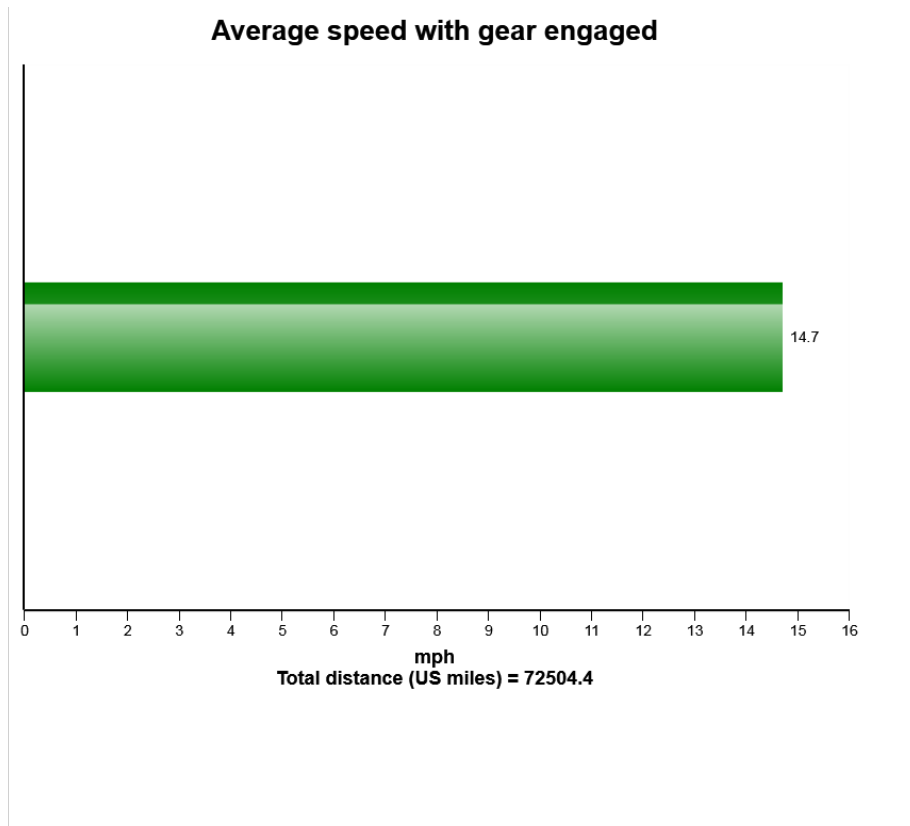
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



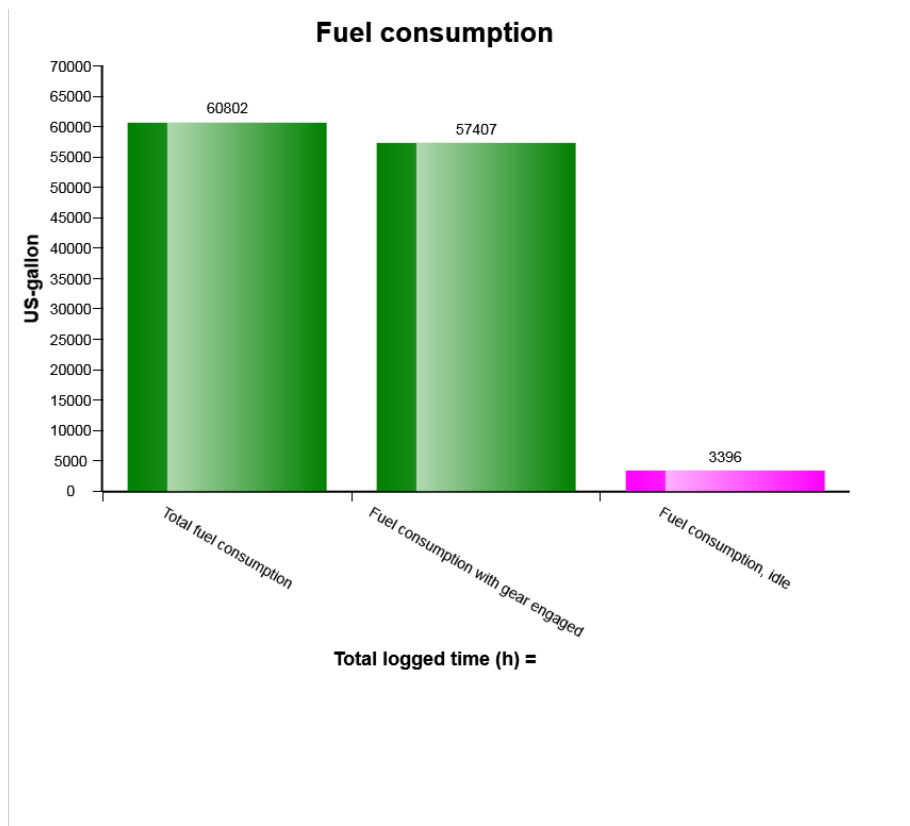
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

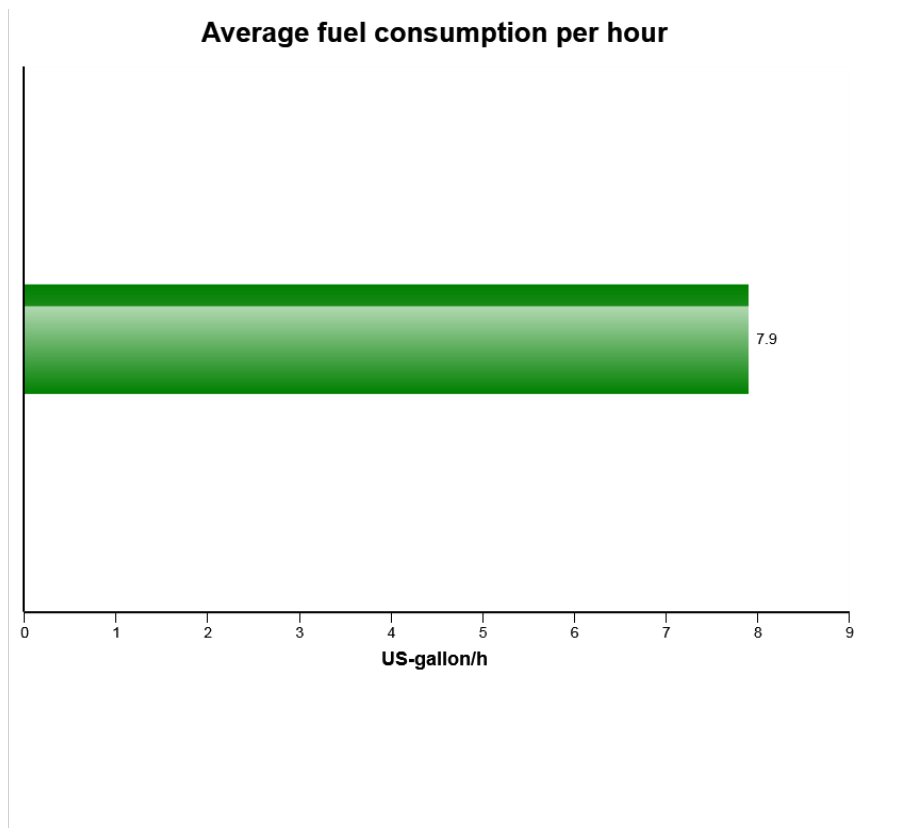


The diagram shows the total fuel consumption, fuel consumption with gear engaged and fuel consumption during idle.

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



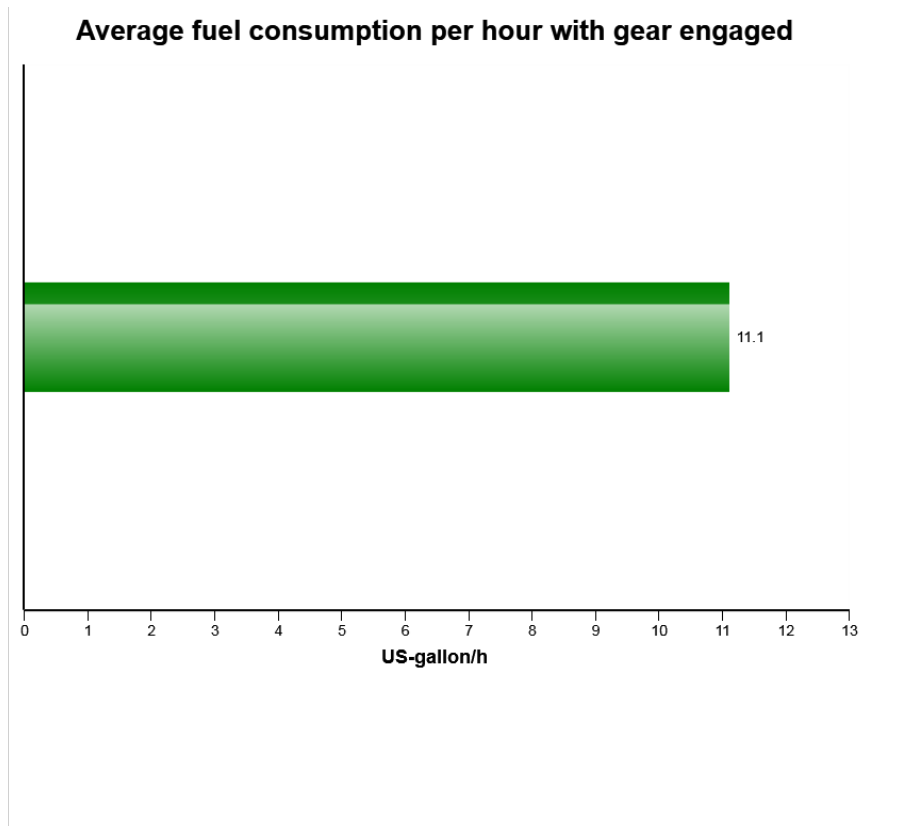
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



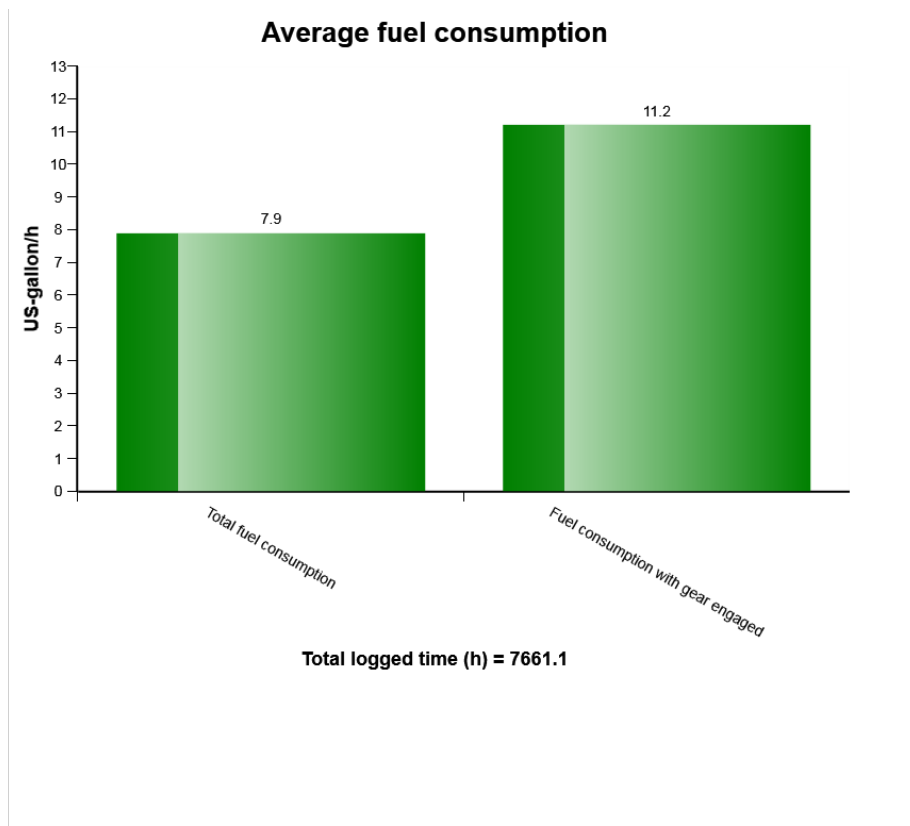
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

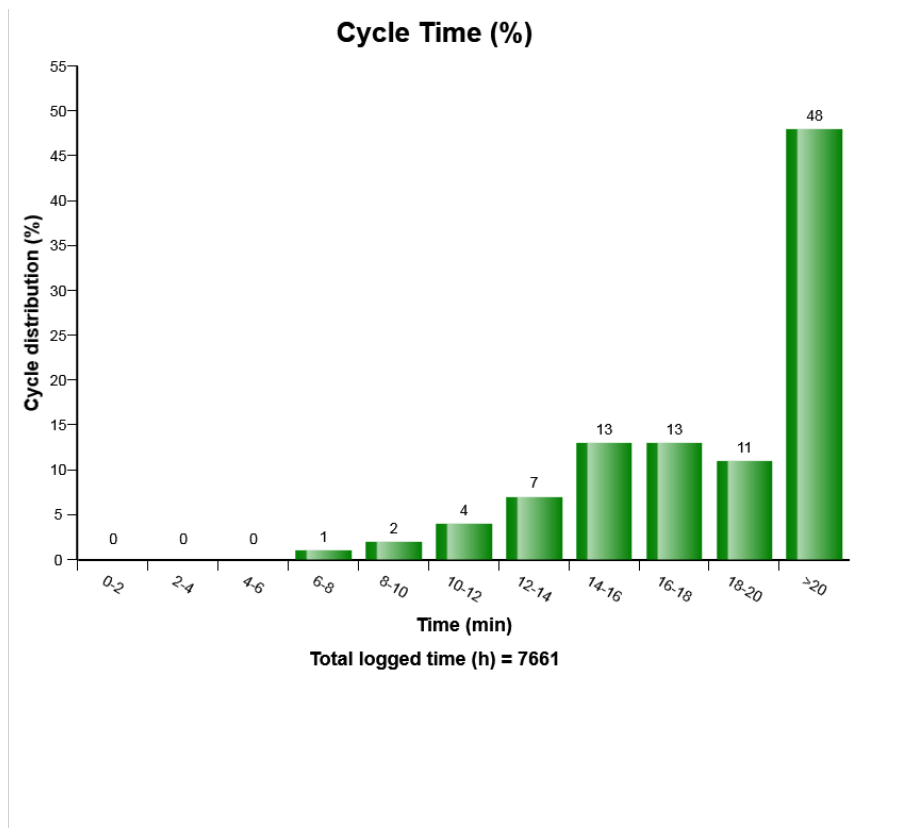


The diagram shows the total average fuel consumption versus average fuel consumption with gear engaged.

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



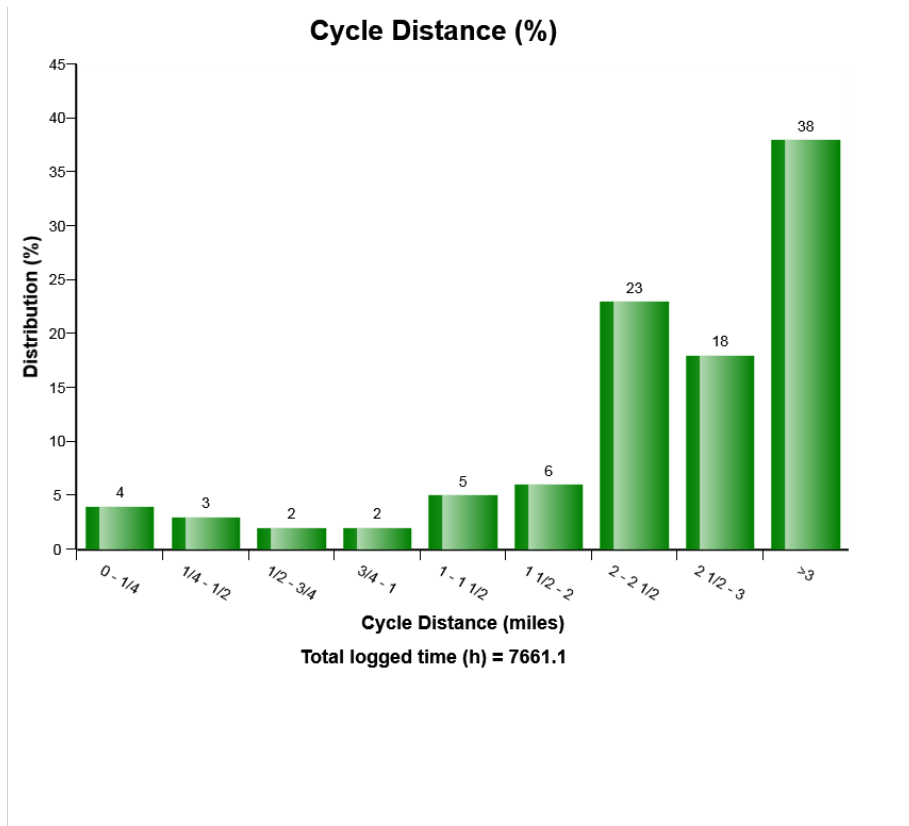
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



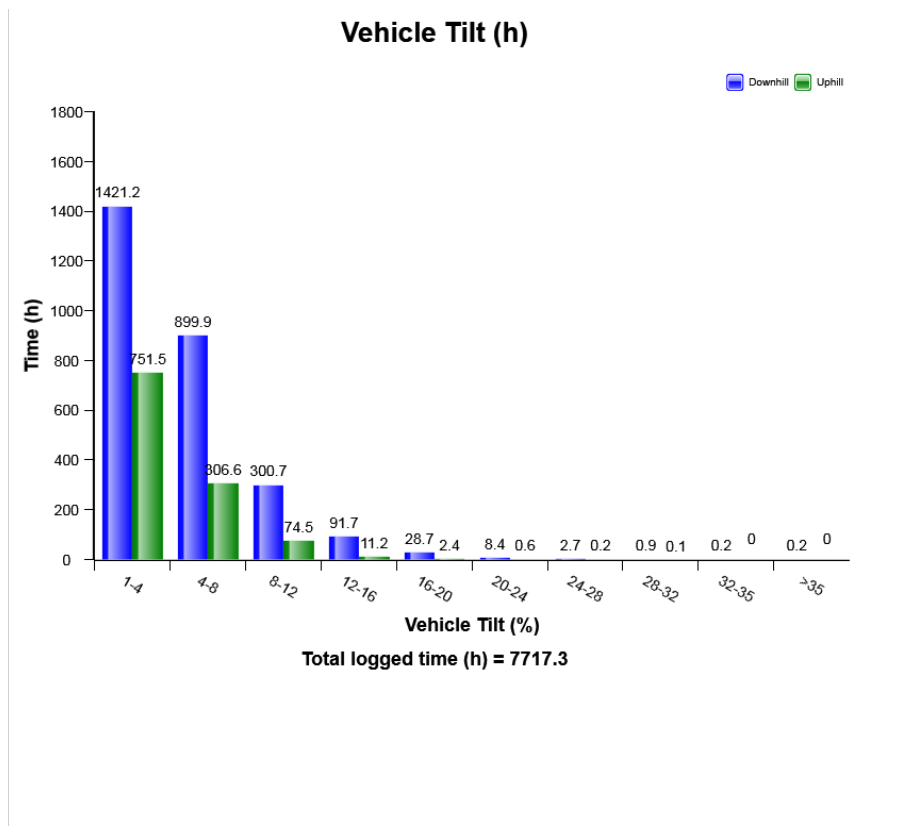
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019

Accumulated performance
Total logged time (h) =

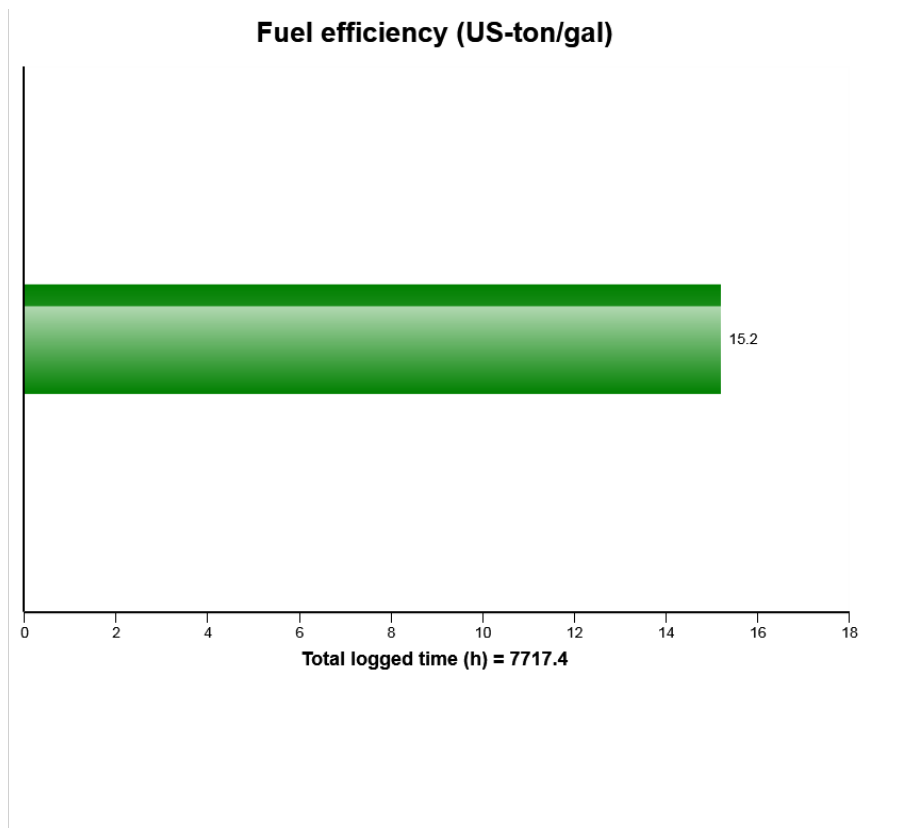
Total logged time (h) =	7717.4
Fuel consumption (US-gallons)	60820
Production (ton,US)	921461
Ton/h	119.4
Ton/gal	15.2
Fuel efficiency (US Gal/ton)	0.07
Number of cycles	22677
Cycles overloaded (%)	5
Load utilisation / cycle (%)	95

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.



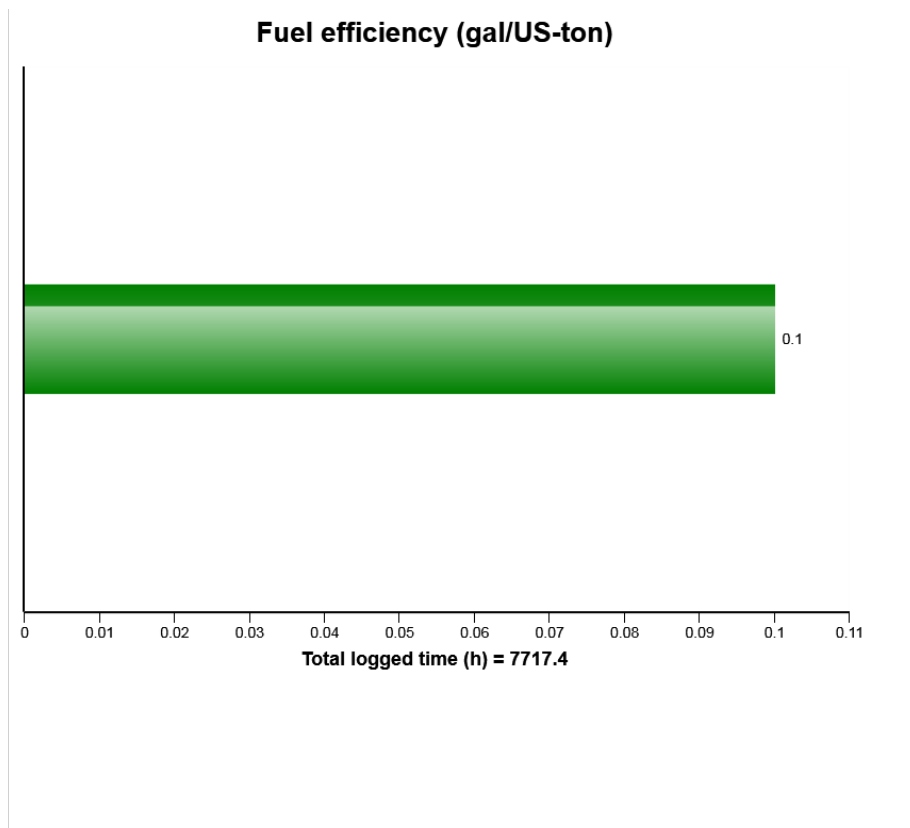
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

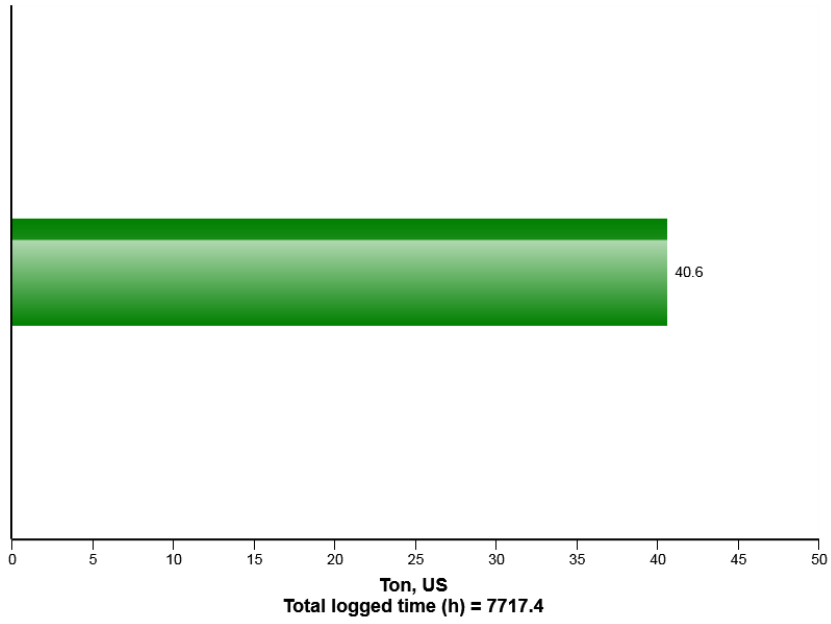


The presentation shows the average fuel consumption per tonne over the machines lifetime

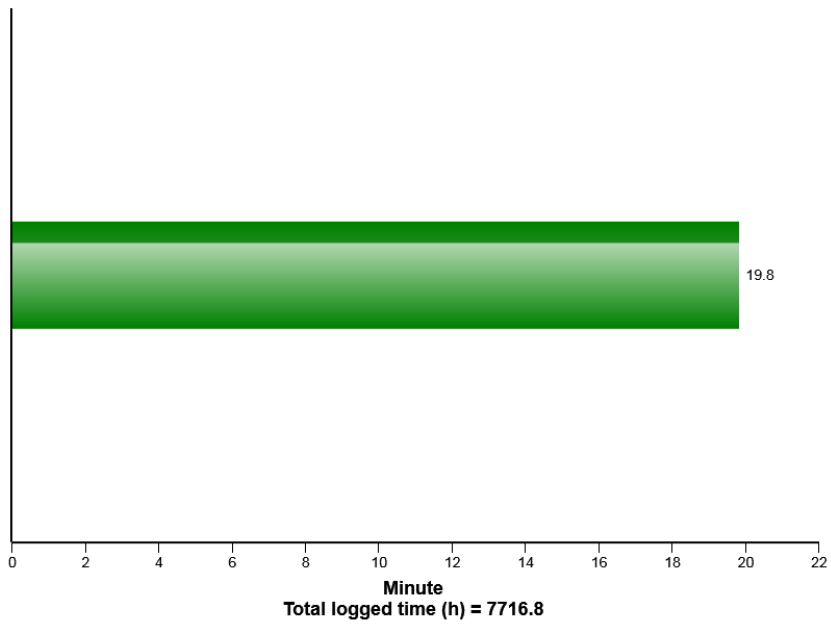


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

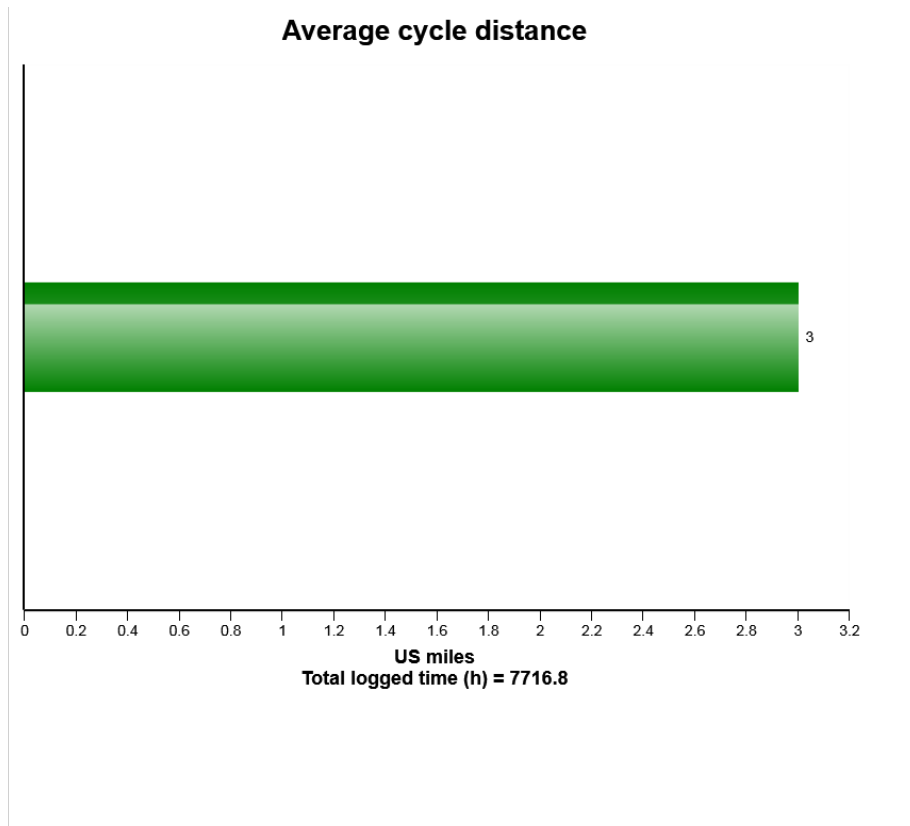
Average load



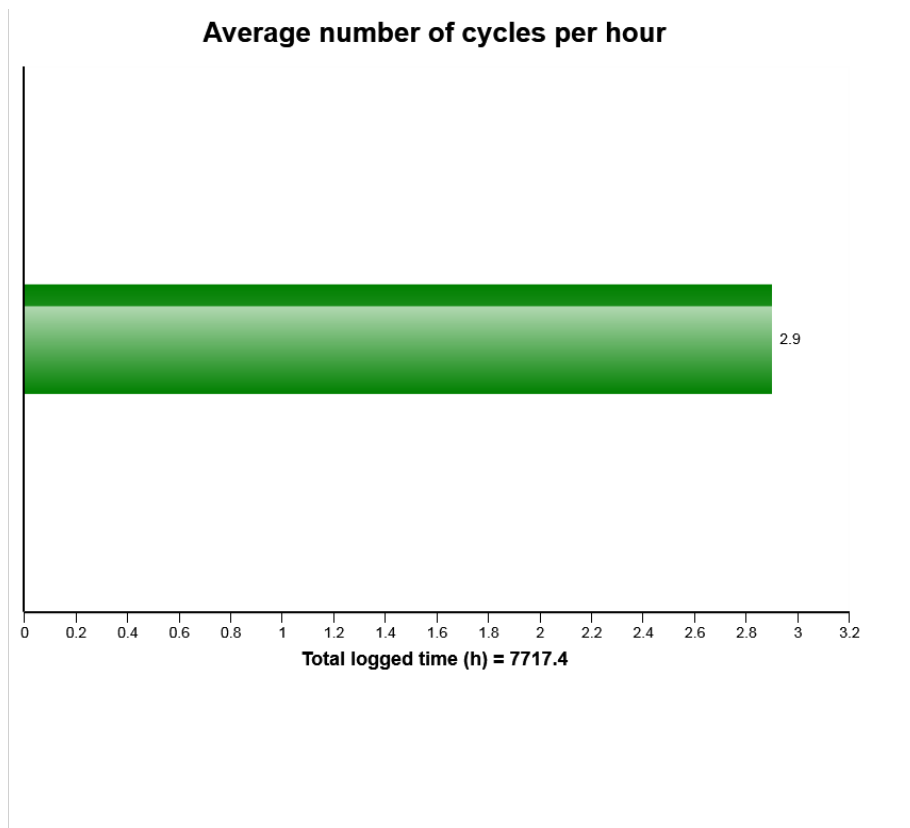
Average cycle time



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



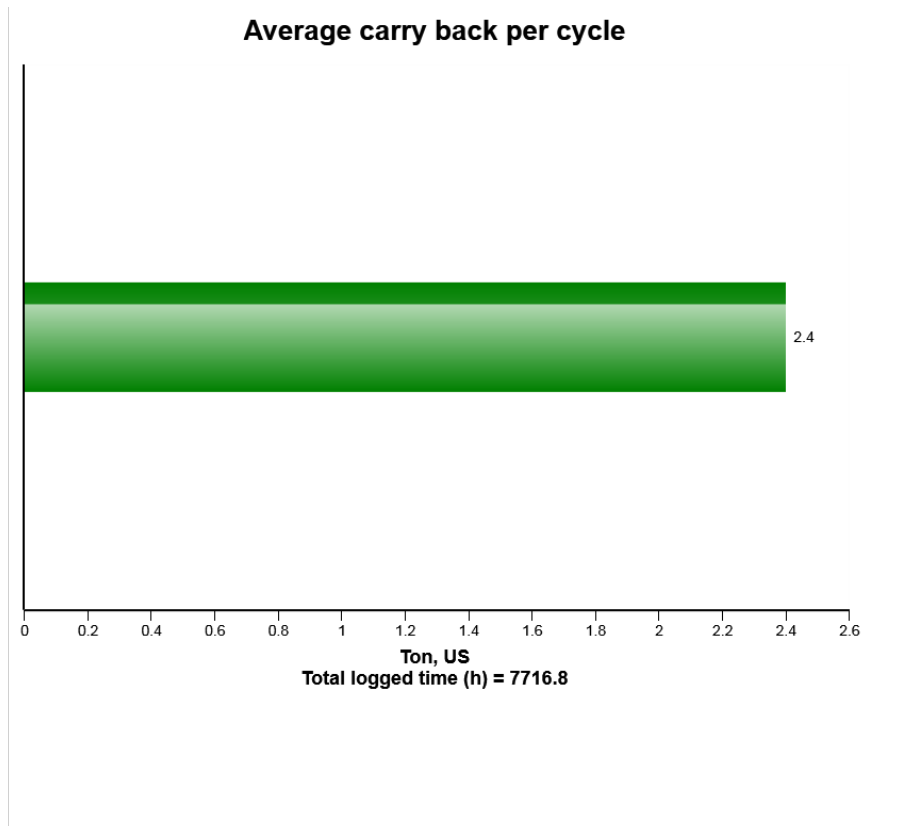
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



The presentation shows the average number of cycles per hour over the machines lifetime.



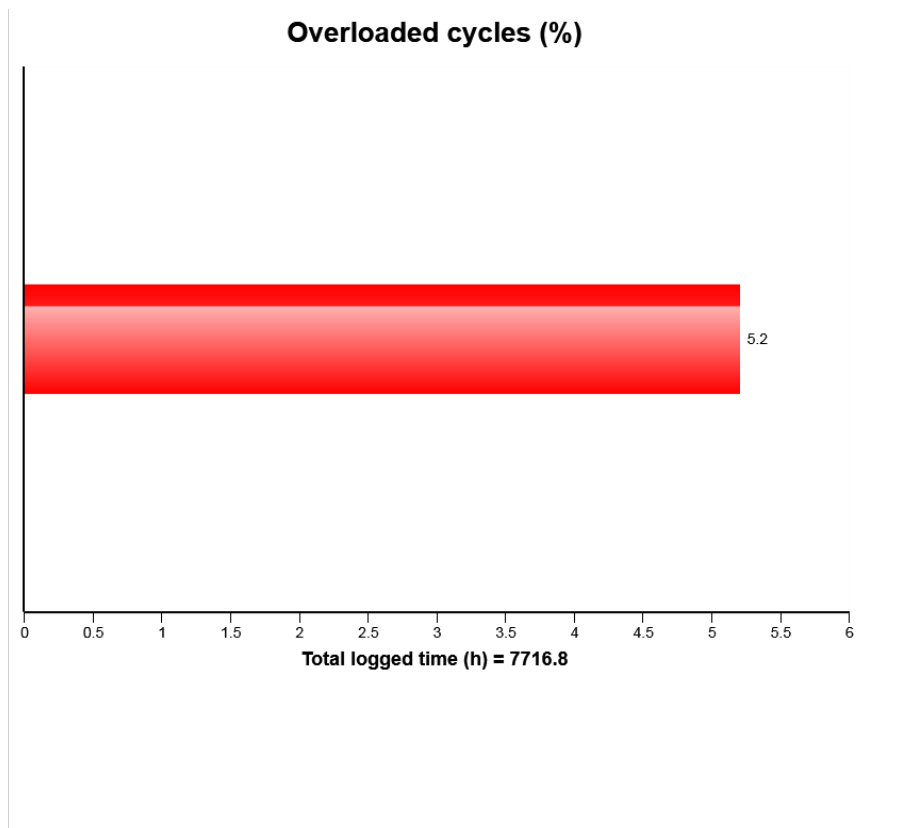
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



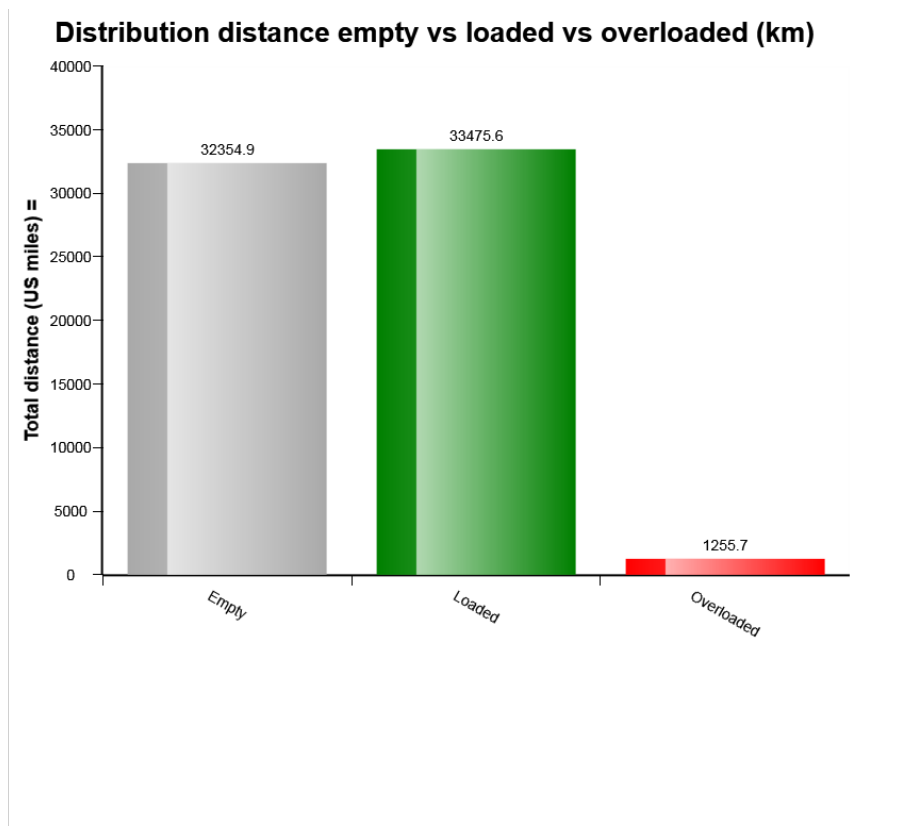
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019

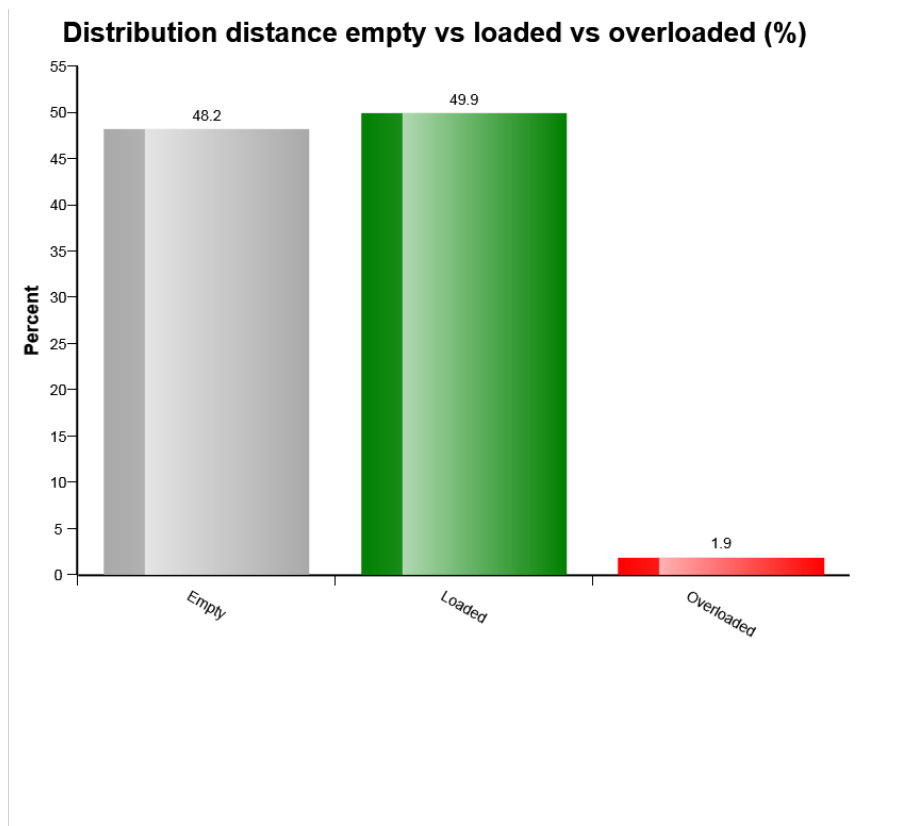


Much time operated with overload puts unnecessary stress to the machine which could lead to shorter machine life and higher repair and maintenance cost.

Much time operated empty could indicate that the machine has been operated a lot when not in production.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

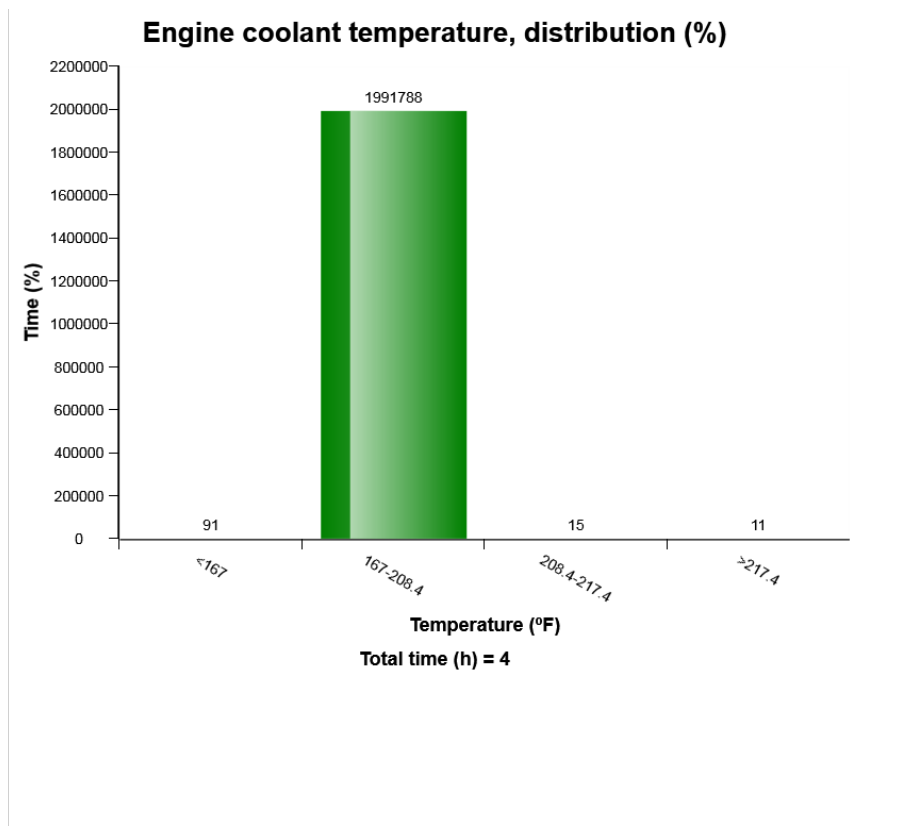


Much time operated with overload puts unnecessary stress to the machine which could lead to shorter machine life and higher repair and maintenance cost.

Much time operated empty could indicate that the machine has been operated a lot when not in production.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

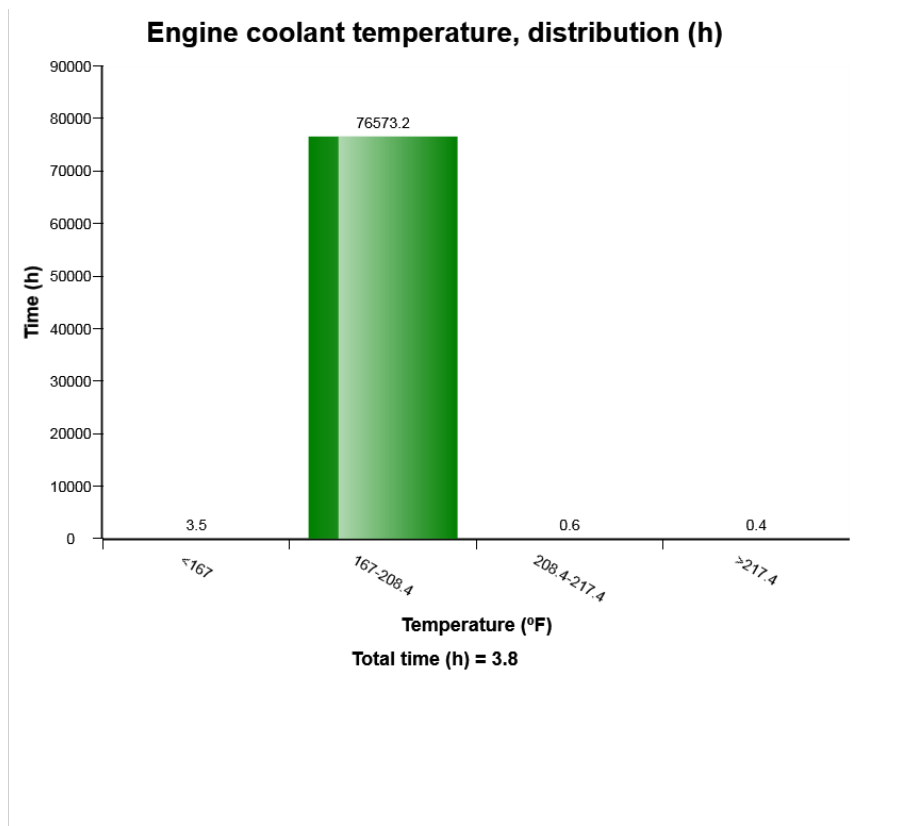
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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	341419	7716.8	2/4/2019



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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

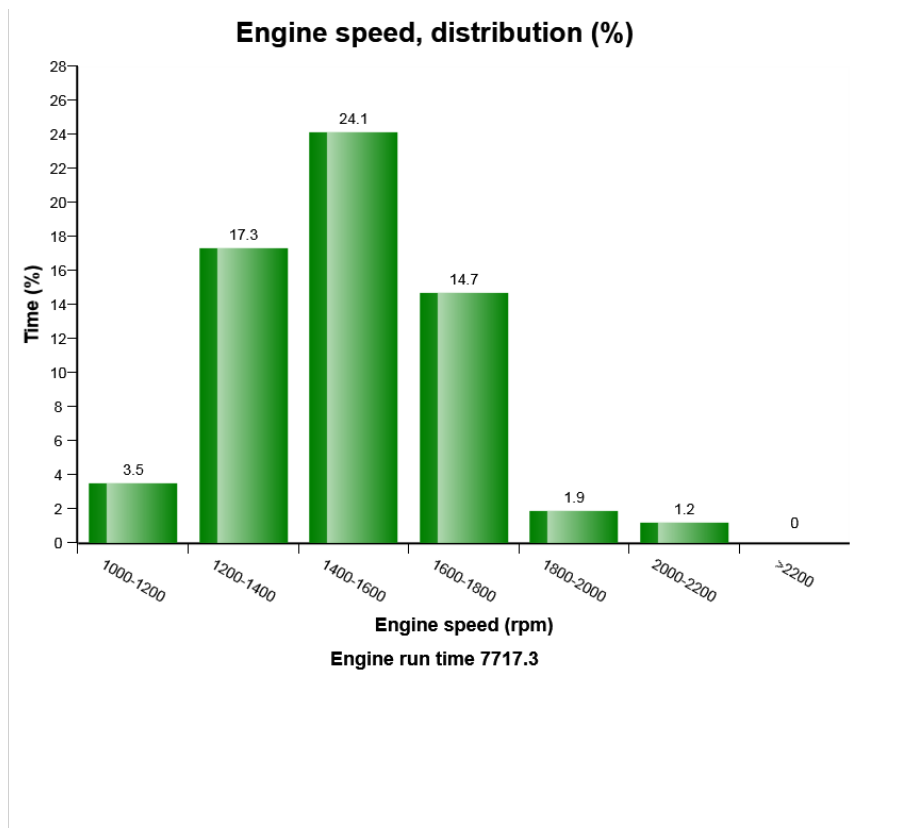
Yellow bar = High working temperature. It is normal to have some registrations in this region.

Red bar = Alarm.

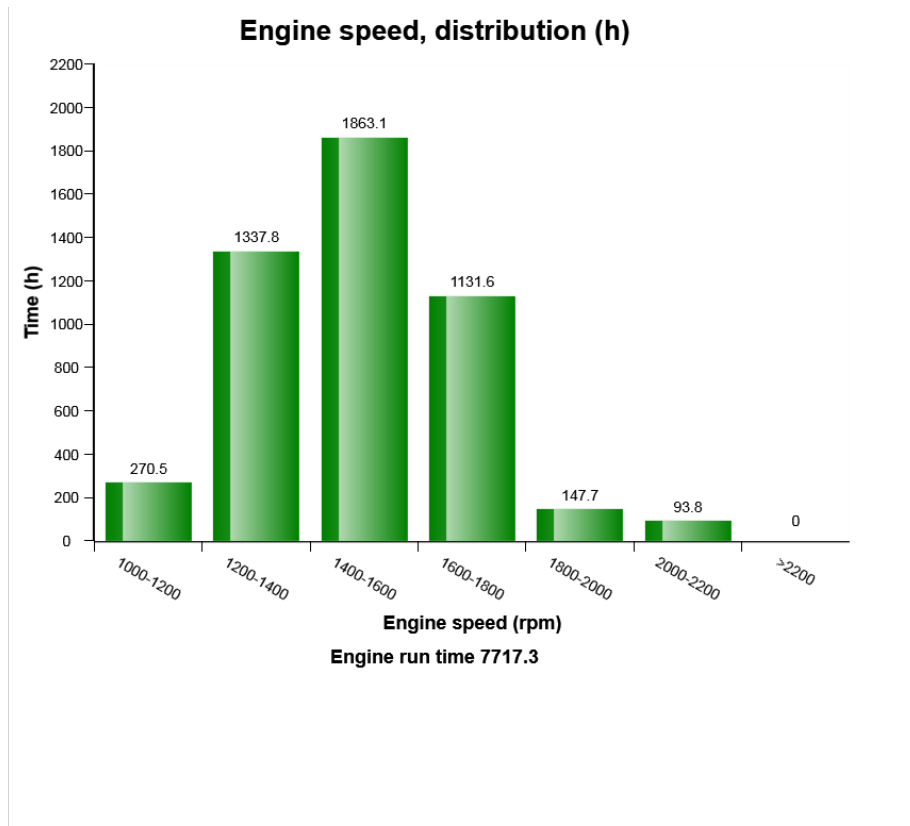
Registrations in this region is not normal, running in this region may cause severe damage.



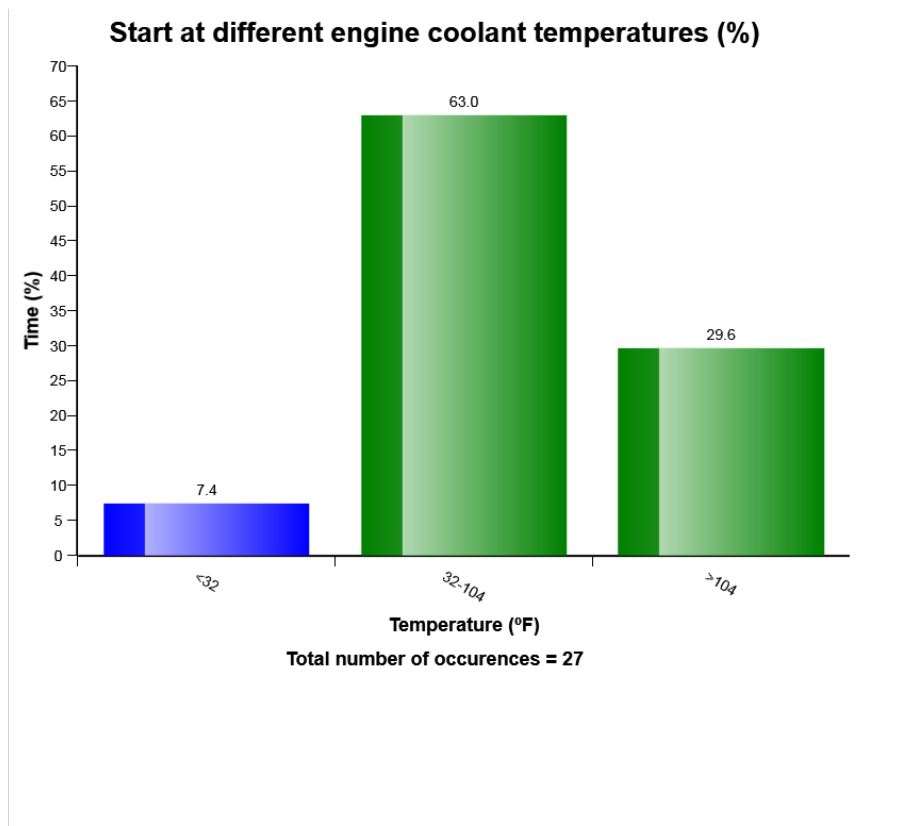
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



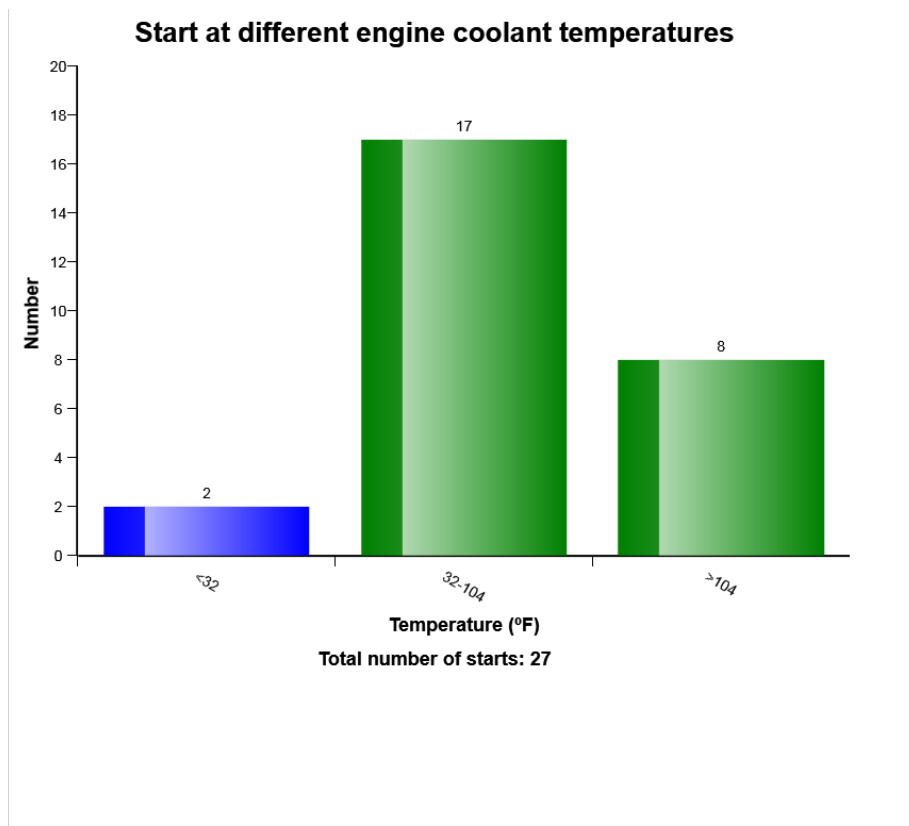
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



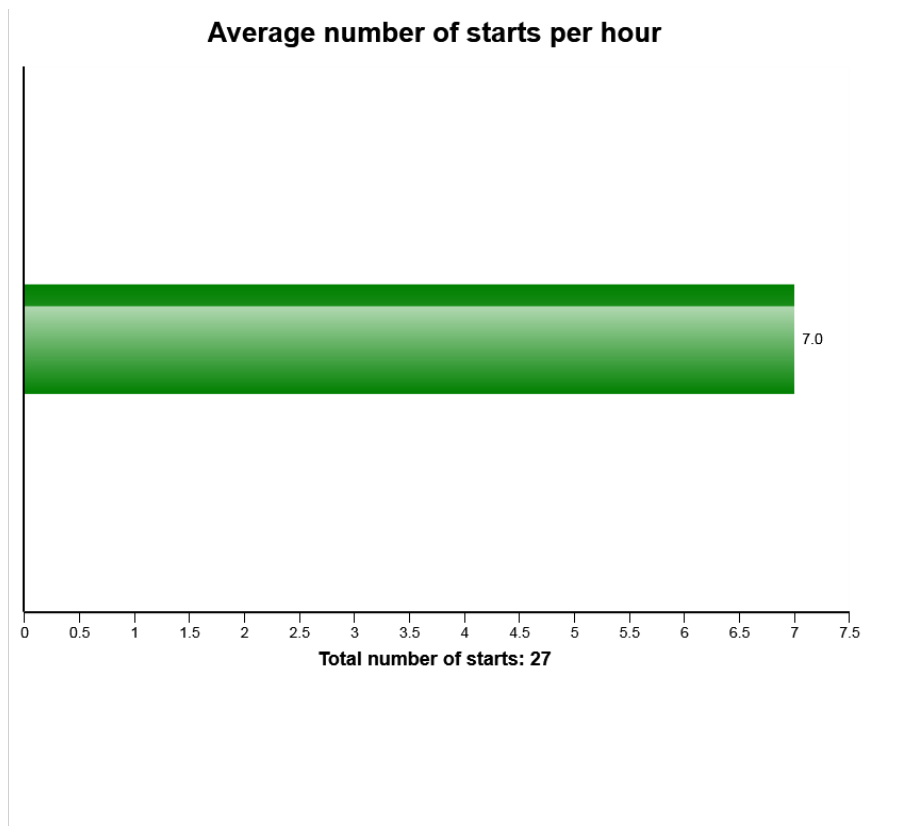
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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	341419	7716.8	2/4/2019

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

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° F)
A	0	2000	0	0	0	0	0	32
B	0	2000	0	0	0	0	0	32
H	0	2000	0	0	0	0	0	32
I	0	2000	0	0	0	0	0	32
J	0	2000	0	0	0	0	0	32
C	420	2000	0	0	0	146	67109888	79
D	3080	2017	4	28	13	47	64	224
E	3493	2017	5	28	18	43	73	224
F	3580	2017	6	3	15	22	67	224
G	3778	2017	6	23	11	49	59	224

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 :



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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

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	341419	7716.8	2/4/2019

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

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° F)
A	0	2000	0	0	0	0	0	32
B	0	2000	0	0	0	0	0	32
C	0	2000	0	0	0	0	0	32
D	0	2000	0	0	0	0	0	32
E	0	2000	0	0	0	0	0	32
F	0	2000	0	0	0	0	0	32
G	0	2000	0	0	0	0	0	32
H	0	2000	0	0	0	0	0	32
I	0	2000	0	0	0	0	0	32
J	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 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 :



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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

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	341419	7716.8	2/4/2019

Starter overheating
Total number of occurrences = 41985

Op hours	Year	Month	Day	Hour	Minute
0	2013	0	0	0	222
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	2207	150	164	1	0
0	2032	0	0	0	47
0	2247	0	0	0	129
0	2000	0	0	0	0
0	2000	0	0	0	0
1	2091	33	2	0	96
1	2004	168	0	0	12

Definition:

The starter can be damaged if it is overheated.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

Alarm is registered if the starter is used continuously more than 40 seconds and if it is less than five minutes since the latest alarm .

Explanation:

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

Low Air filter pressure
Total number of occurrences = 0

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)
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	2146	160	164	1	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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

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	341419	7716.8	2/4/2019

Regeneration ignored
Total number of ignored regenerations 0

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
* 0	2000	0	0	0	0	0
* 0	2053	2	181	28	225	0
* 0	2012	47	181	28	66	0
* 0	2023	9	181	28	20	0
* 0	2035	30	180	28	42	0
* 0	2047	46	180	28	206	0
* 0	2002	54	180	28	61	0
* 0	2059	2	180	28	92	0
* 0	2050	15	180	28	189	0
* 0	2005	3	180	28	27	0
* 0	2043	34	180	28	93	0
* 0	2055	35	163	20	90	0
* 0	2026	19	101	18	208	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	2054	46	181	28	252	0
* 0	2009	36	181	28	134	0
* 3584	2146	160	164	1	0	246



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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	2146	160	164	1	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	341419	7716.8	2/4/2019

Regeneration duration
Total number of occurrences = 0

Op hours	Year	Month	Day	Hour	Minute	Duration (min)
0	2000	0	0	0	0	0
0	2029	24	157	28	175	4762304
0	2012	10	156	28	68	3923444
0	2043	29	153	28	4	3643823
0	2031	48	150	28	184	2525342
0	2049	36	150	28	43	1966102
0	2043	55	146	28	55	1686481
0	2005	34	144	28	27	6438934
0	2006	30	143	28	123	5879693
0	2012	15	140	28	6	5600073
0	2055	29	139	28	224	4761212
0	2000	0	0	0	0	459437
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	2024	56	159	28	1	5041925
0	2008	2	160	28	28	1967194
29	2000	19	2	208	70	3922351



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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	459437
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	341419	7716.8	2/4/2019

High voltage
Total number of occurrences = 0

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
420	2000	0	0	0	56	21	0.0
256	2207	150	164	1	0	0	25303630.4
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	2042	43	1	0	0	274	0.0
0	2001	0	0	0	2	4	0.6
0	2000	0	0	0	0	0	0.8
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 :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

Low voltage
Total number of occurrences = 3

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme value
7662	2019	1	20	6	4	20	12.7
7662	2019	1	21	0	35	13	14.7
7660	2018	9	10	15	53	443	15.6
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	2207	150	164	1	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 :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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 :

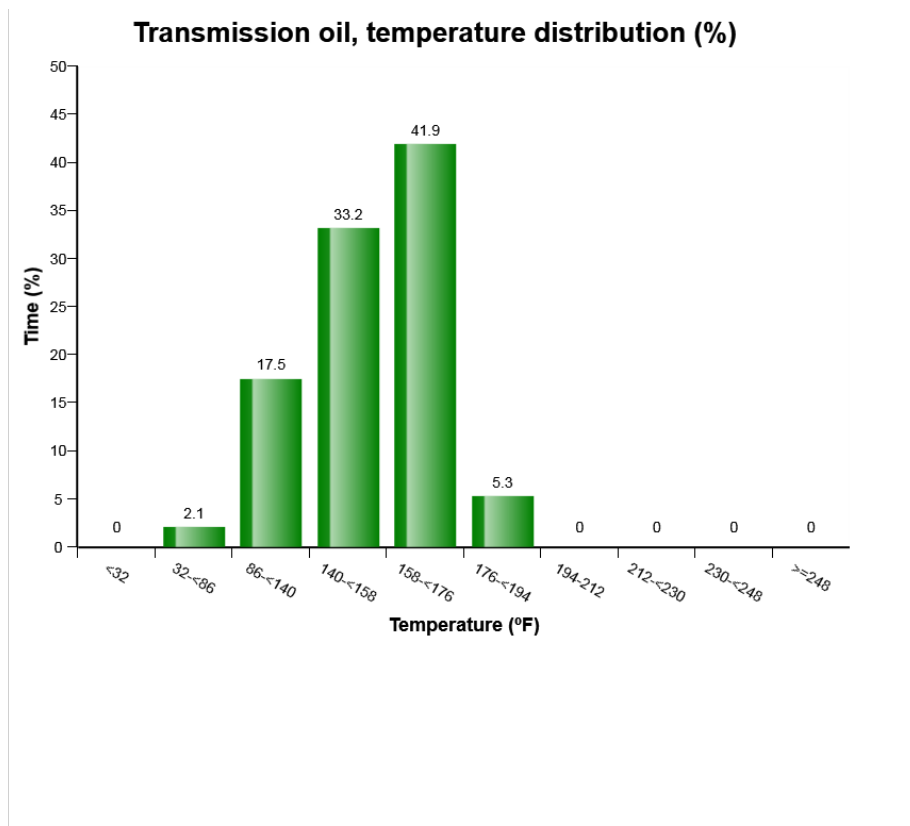
The extreme value column displays the most extreme value during the event.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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

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

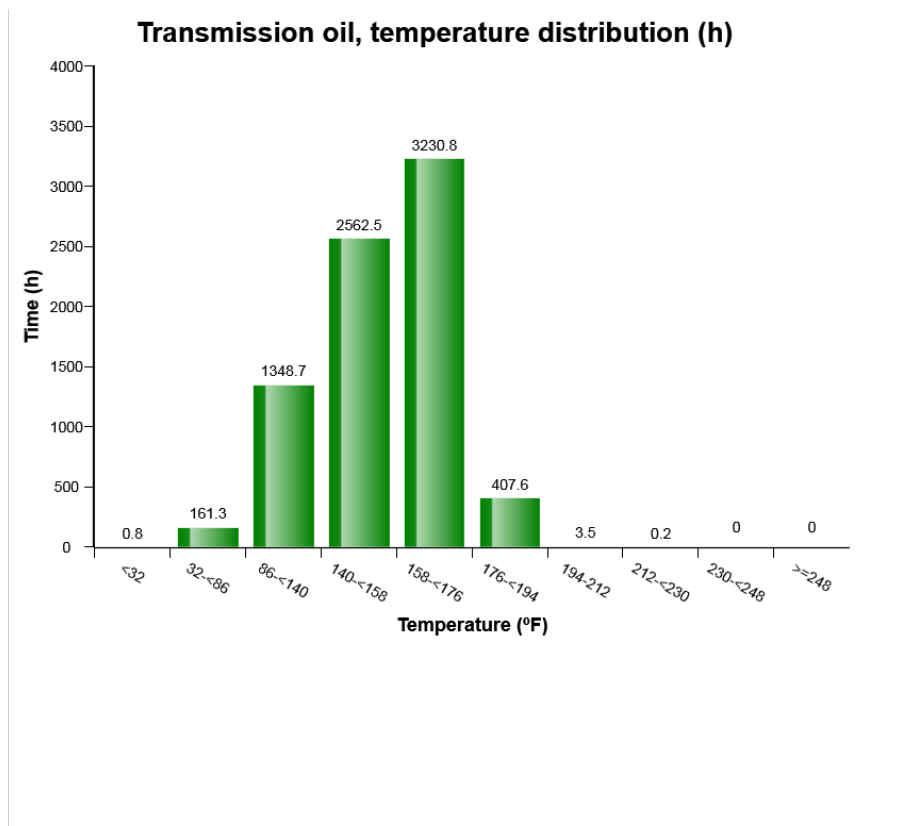
The bar that describes temperatures from 230°F until 248°F is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

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	341419	7716.8	2/4/2019



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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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

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

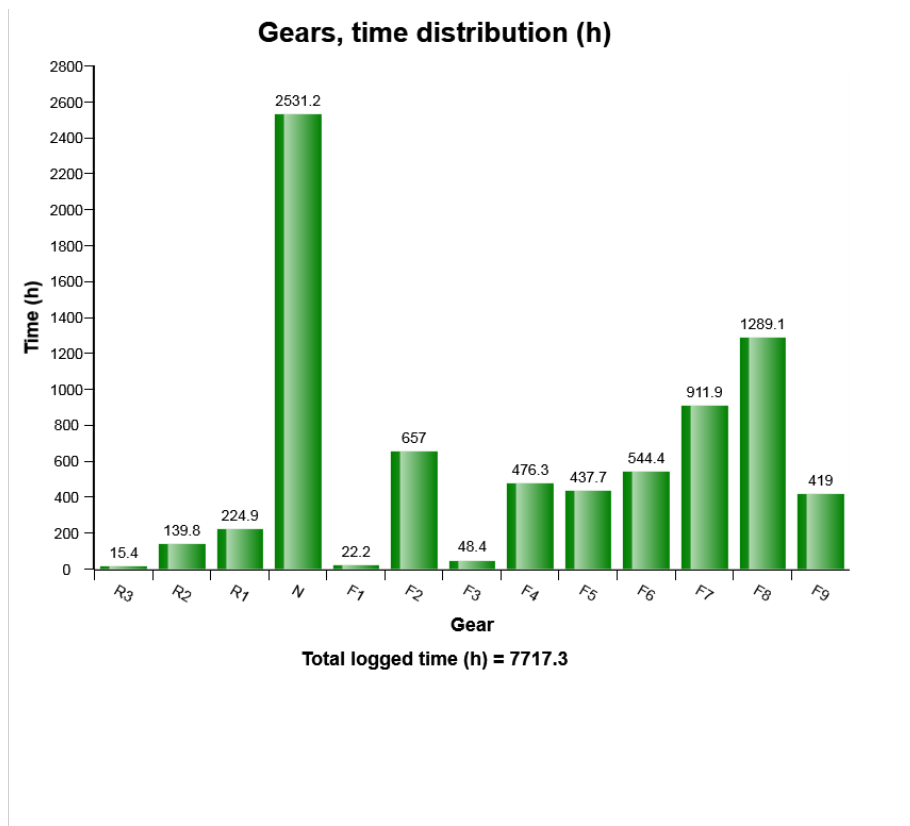
The bar that describes temperatures from 230°F until 248°F is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

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	341419	7716.8	2/4/2019

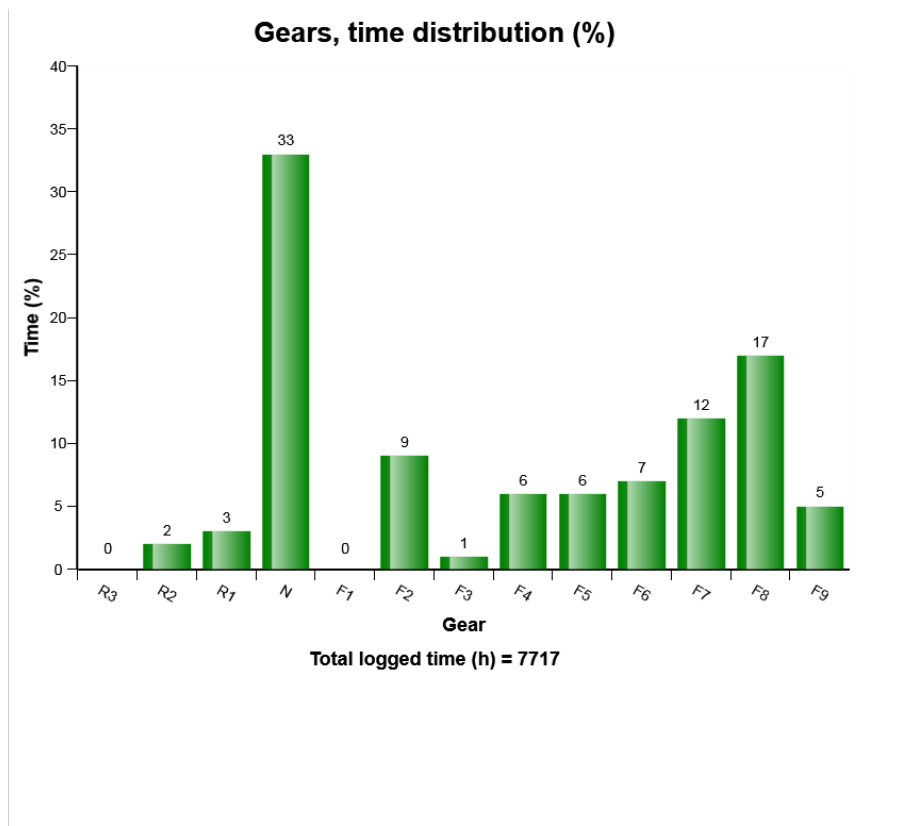


The diagram shows the time for each gear. Each bar represents a gear.

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

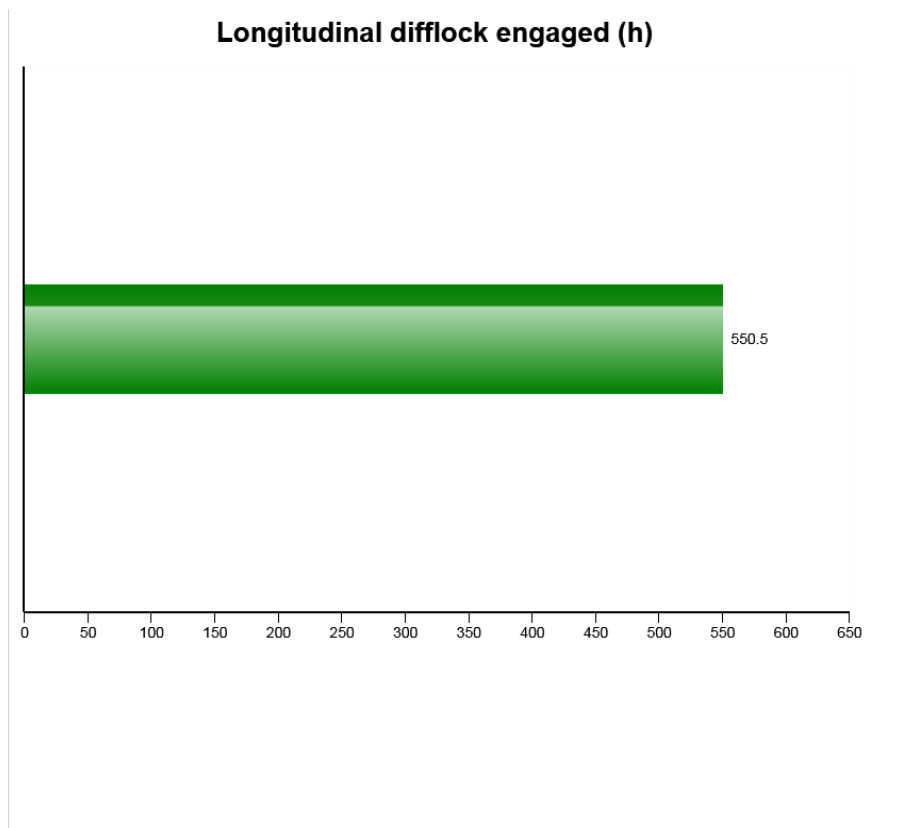


The diagram shows the time for each gear. Each bar represents a gear.

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



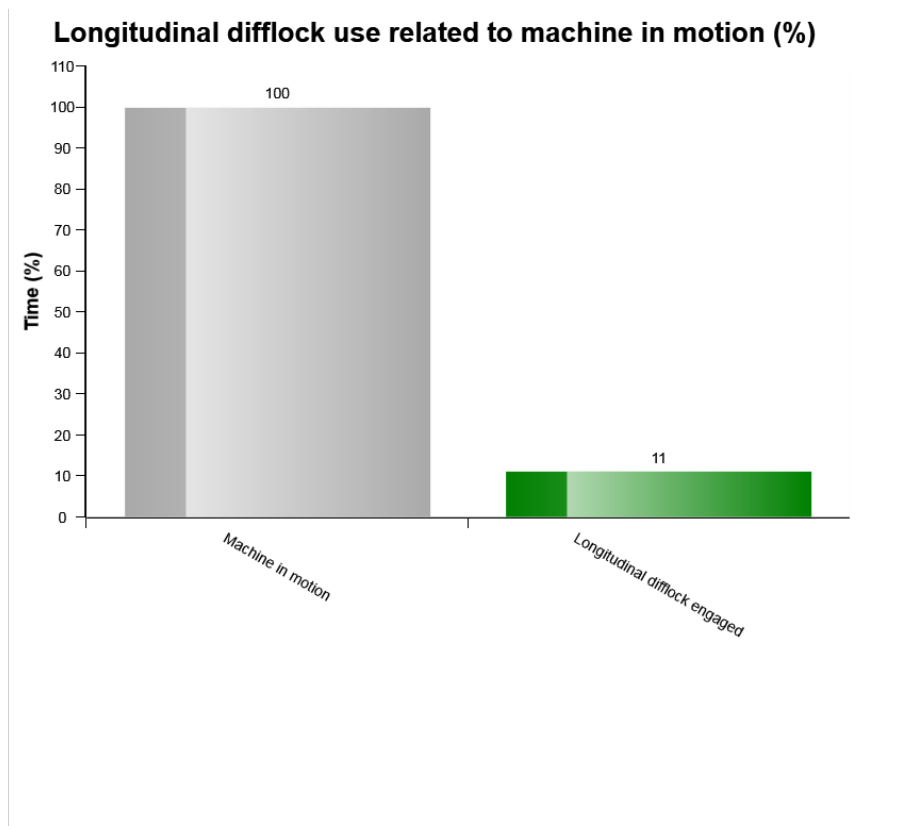
Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019

**Transmission oil pressure low
Total number of occurrences = 5**

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (psi)
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
953	2016	10	14	13	22	0	1652
1562	2016	11	17	0	59	0	1594
3449	2017	5	21	14	34	0	632
3627	2017	6	5	10	30	0	1546
4155	2017	7	28	20	24	0	844

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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 :

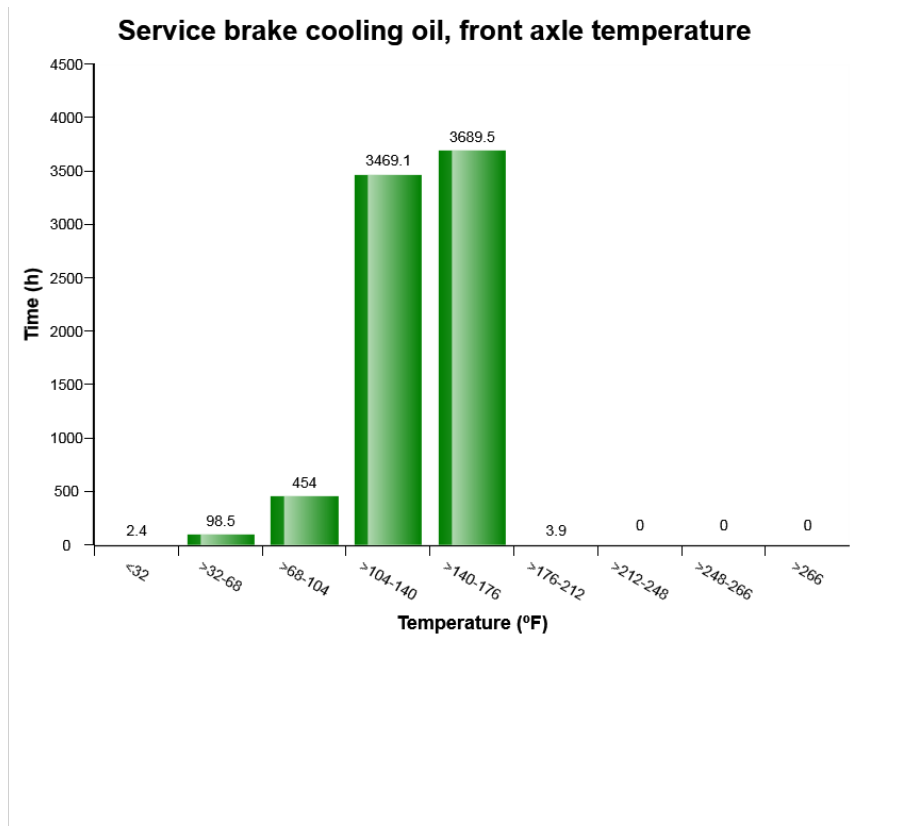
The extreme value column displays the most extreme value during the event.

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	341419	7716.8	2/4/2019

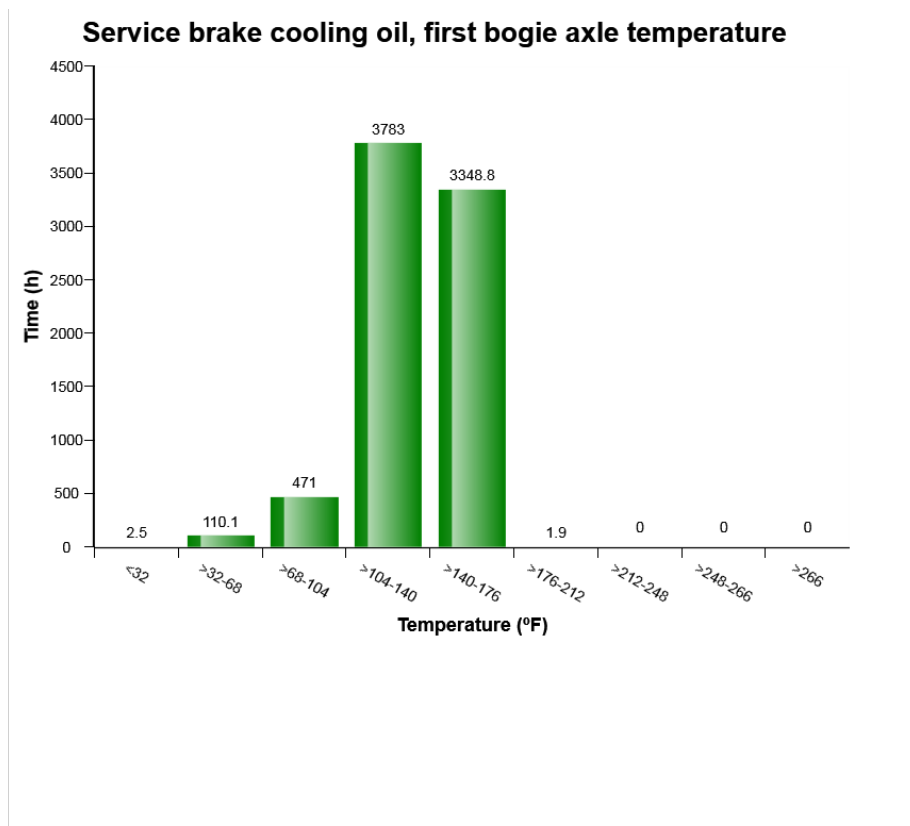


The diagram shows the front axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the front axle to the oil cooler, that is, the warmest oil in the circuit.

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	341419	7716.8	2/4/2019

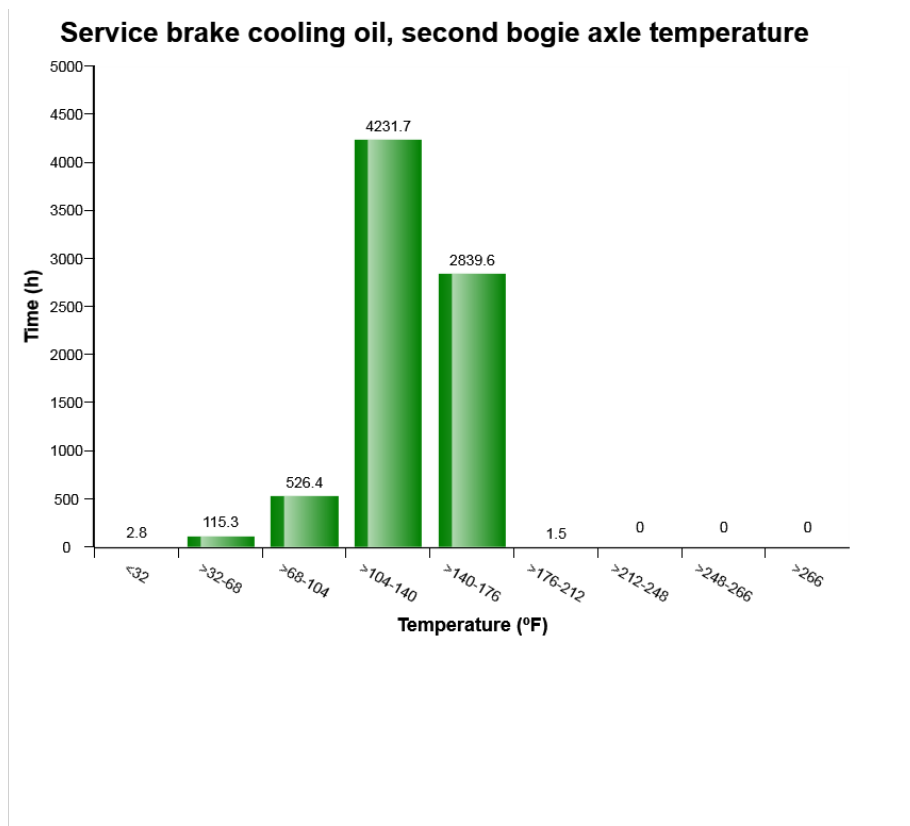


The diagram shows the first bogie axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the first bogie axle to the oil cooler, that is, the warmest oil in 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	341419	7716.8	2/4/2019

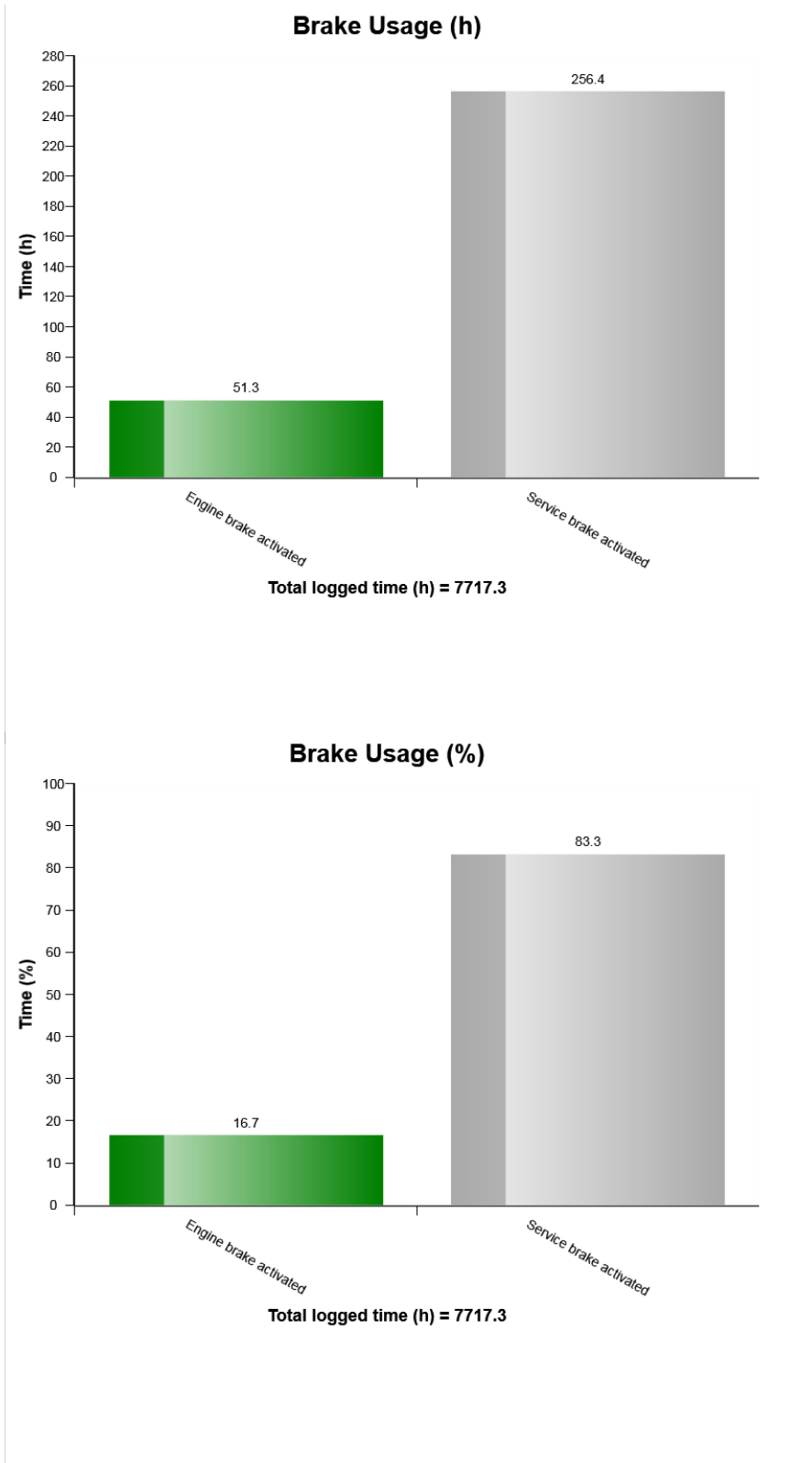


The diagram shows the front axle brake cooling oil temperature. The temperatures are divided into ranges, yellow bar (>248-266°F) and red bar (>266°F) shows abnormal temperatures. The temperature is registered in the line from the second bogie axle to the oil cooler, that is, the warmest oil in the circuit.

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	341419	7716.8	2/4/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

Low Brake Servo Pressure
Total number of occurrences = 12

	Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (psi)
C	1971	2017	1	23	15	41	0	2126
D	4853	2017	10	24	8	37	0	2207
E	5094	2017	11	17	7	8	0	2225
F	6624	2018	3	13	9	41	0	2411
G	7484	2018	6	8	0	2	0	2114
H	7588	2018	6	15	10	10	0	2182
I	7588	2018	6	15	10	10	0	2262
J	7588	2018	6	15	10	10	0	2374
A	7614	2018	6	17	10	37	10	2225
B	7663	2018	6	20	10	39	0	2145

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 :



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

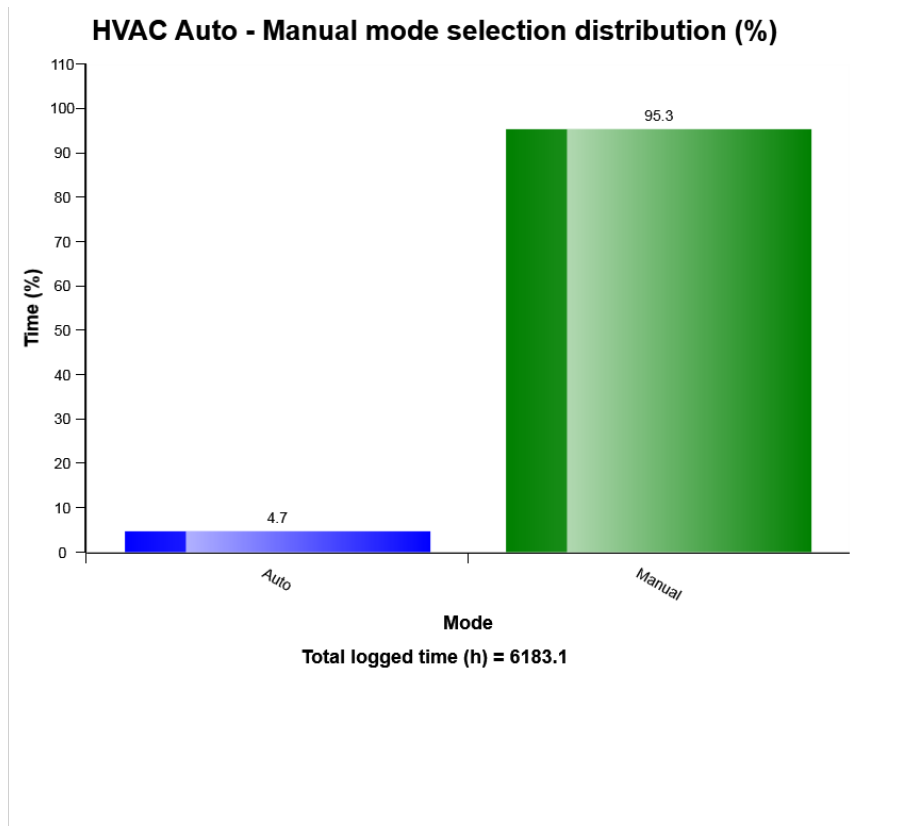
The extreme value column displays the most extreme value during the event.

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	341419	7716.8	2/4/2019



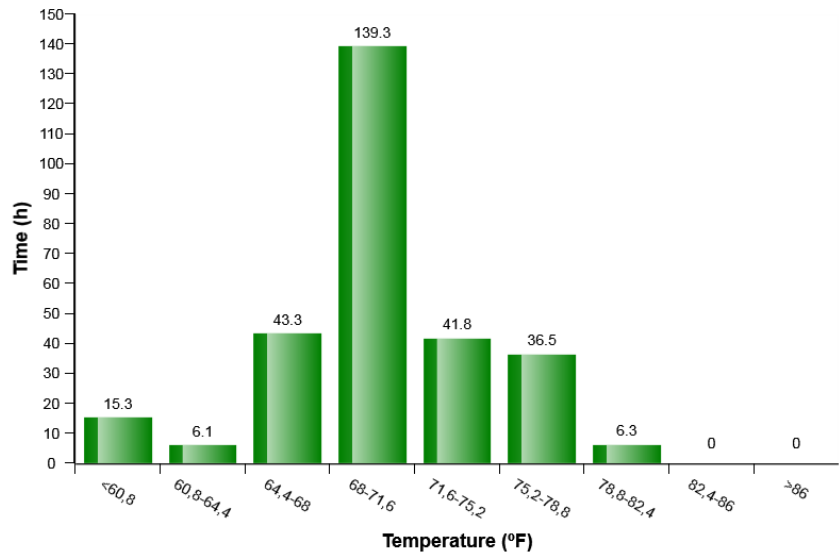
Definition:

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	341419	7716.8	2/4/2019

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

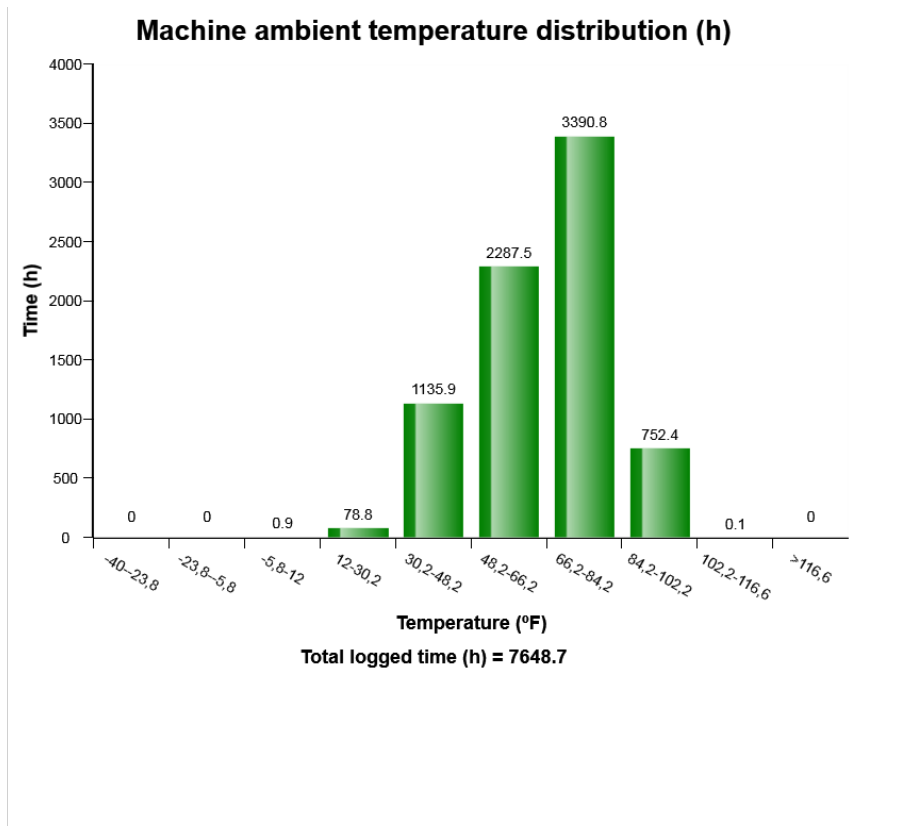


Definition:

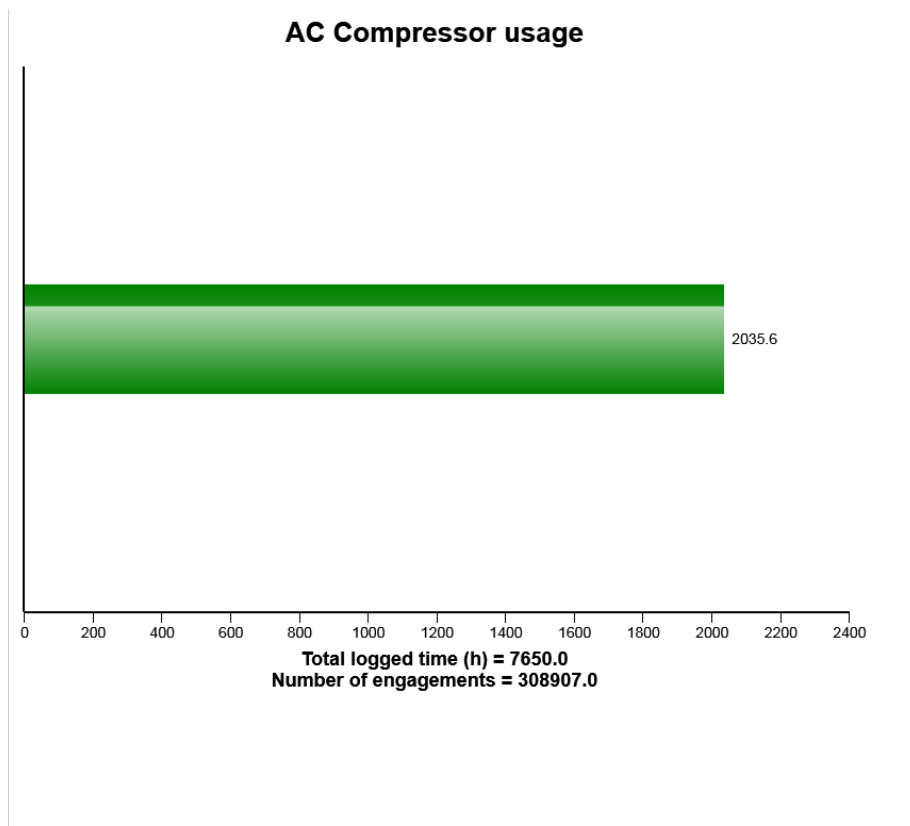
The diagram describes air temperature setting distribution for HVAC auto control mode established by operator in Cabin



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.

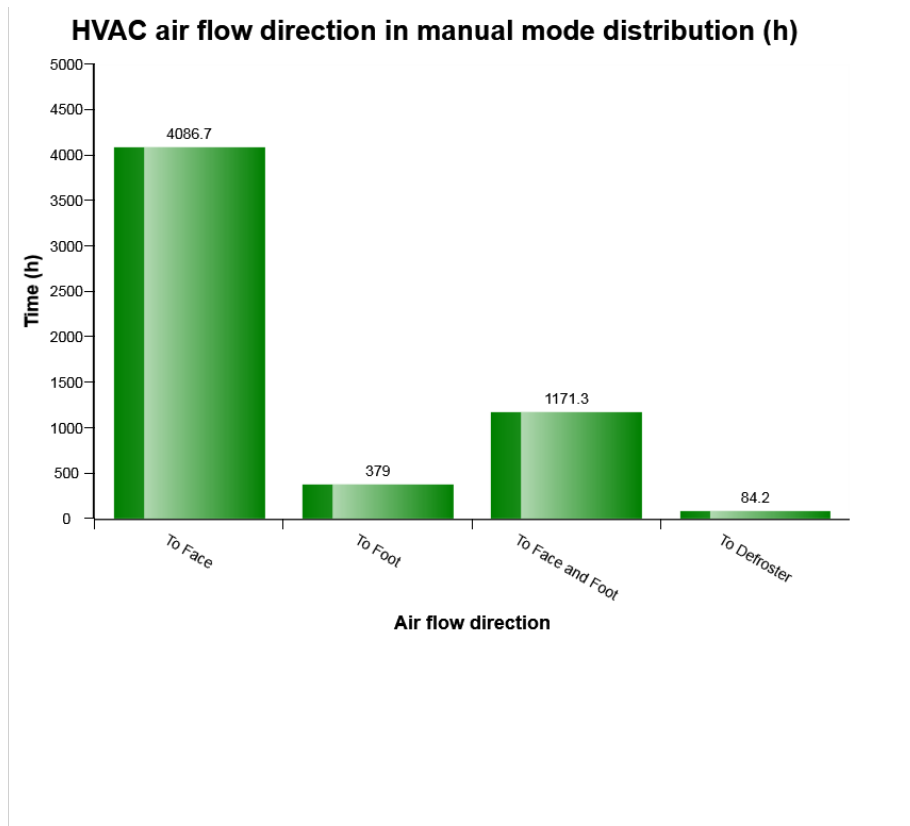


Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

-



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

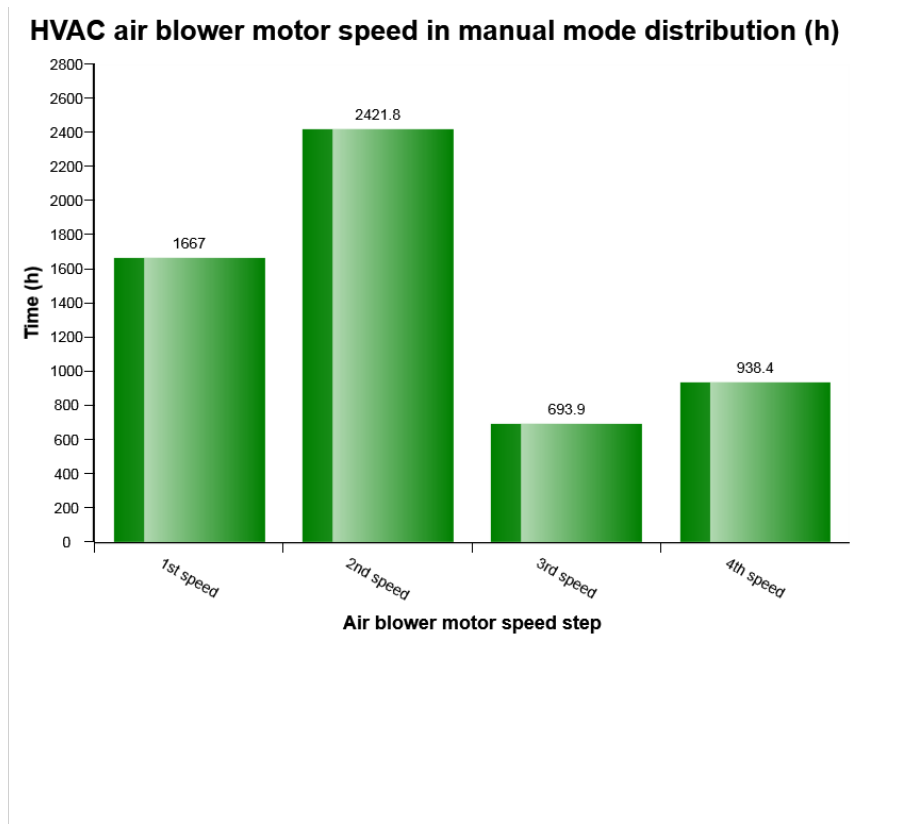


Definition:

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	341419	7716.8	2/4/2019



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	341419	7716.8	2/4/2019

AC High Pressure
Total number of occurrences = 133

0	Year	Month	Day	Hours	Minute	Duration (sec)	Extreme (° F)
3918	2017	7	7	12	42	53	95
3919	2017	7	7	13	44	41	95
3919	2017	7	7	13	32	23	95
3919	2017	7	7	13	23	122	95
4029	2017	7	21	17	17	149	95
4029	2017	7	21	17	54	385	91
4045	2017	7	22	16	41	102	95
4064	2017	7	23	16	33	105	99
4335	2017	8	17	16	0	25	93
7614	2018	6	17	10	37	69	86
7615	2018	6	17	11	2	57	86
7628	2018	6	18	15	9	55	90
7646	2018	6	19	14	45	8	99
7647	2018	6	19	16	16	12	99
7649	2018	6	19	17	56	17	97
7649	2018	6	19	17	27	55	97
7650	2018	6	19	18	46	22	97
7650	2018	6	19	18	37	26	97
7667	2018	6	20	16	22	45	99
7713	2018	8	27	12	57	22	90

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

**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

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

AC System Cut Out Pressure
Total number of occurrences = 75

Op hours	Year	Month	Day	Hour	Minute	Duration (sec)	Extreme (° F)
3895	2017	7	2	19	14	37	91
3895	2017	7	2	19	5	28	91
3895	2017	7	2	18	51	25	91
3896	2017	7	2	20	10	33	88
3896	2017	7	2	19	36	34	90
3897	2017	7	2	20	31	7	88
3897	2017	7	2	20	53	6	86
3898	2017	7	2	21	37	26	84
3899	2017	7	2	22	15	23	82
3902	2017	7	3	8	43	75	84
3916	2017	7	7	10	40	92	90
3918	2017	7	7	12	43	44	95
3919	2017	7	7	13	24	78	95
5630	2001	10	23	21	4	283	16
5635	2001	10	24	18	33	1317	32
7614	2018	6	17	10	38	18	86
7615	2018	6	17	11	2	41	86
7716	2002	11	6	17	8	827	57
7716	2019	1	20	23	22	-511361781	-2
7716	2002	11	7	11	38	252	16

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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 :

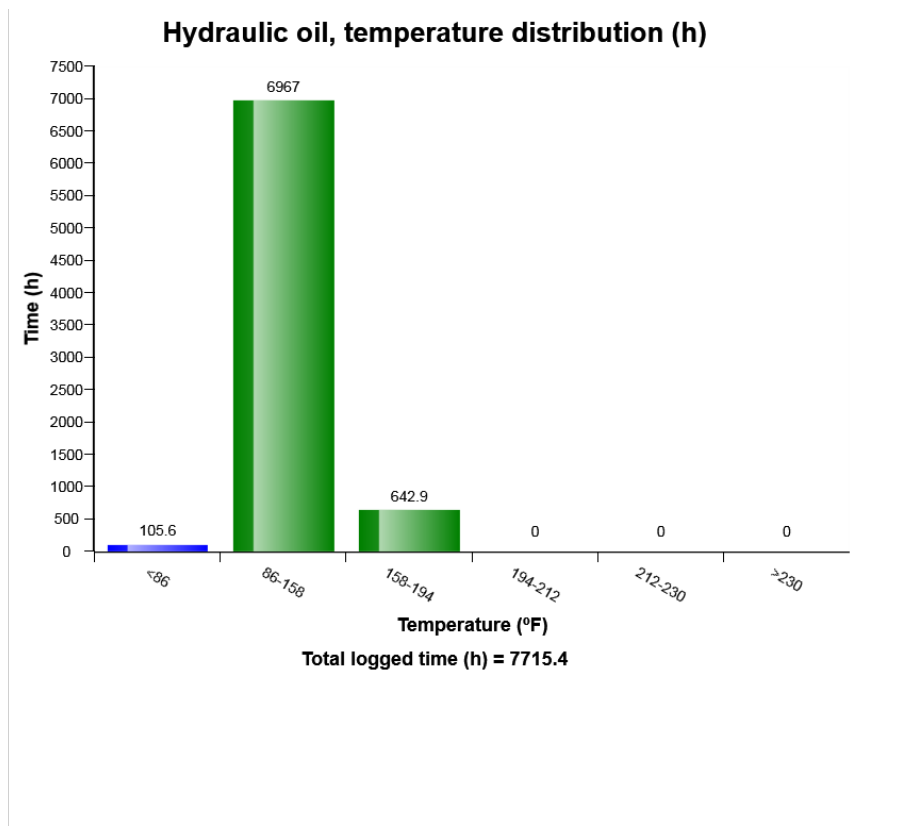
The extreme value column displays the most extreme value during the event.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019



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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

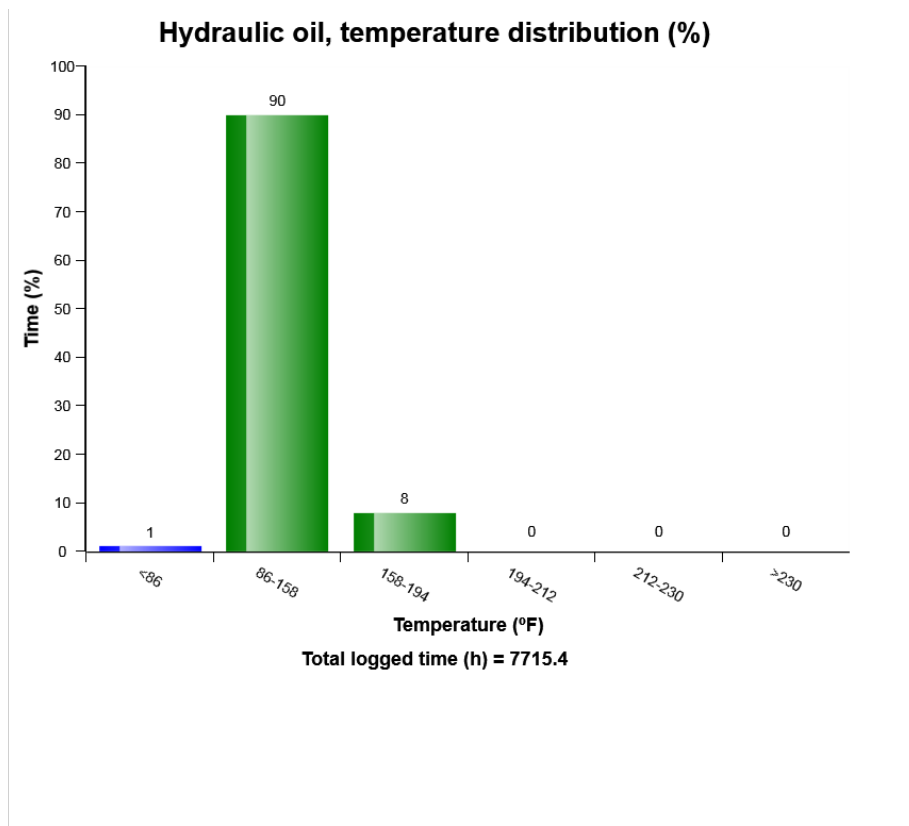
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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	341419	7716.8	2/4/2019



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.



Machine model	SerialNo	Operating Hours	Reading Date
A40G	341419	7716.8	2/4/2019

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.

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.

