

VOLVO CONSTRUCTION EQUIPMENT MATRIS REPORT

Machine model L110H	SerialNo 10290	Operating Hours 9453.1	Reading Date 7/23/2018
Company name Arnold Machinery	Dealer ARNOLD MACHINERY	Report Issuer	
Contact name	Technician lvcetech	Primary Application Rehandling	
Site	Workorder	Ground Condition	

MATRIS Reading, Summary / Recommendation

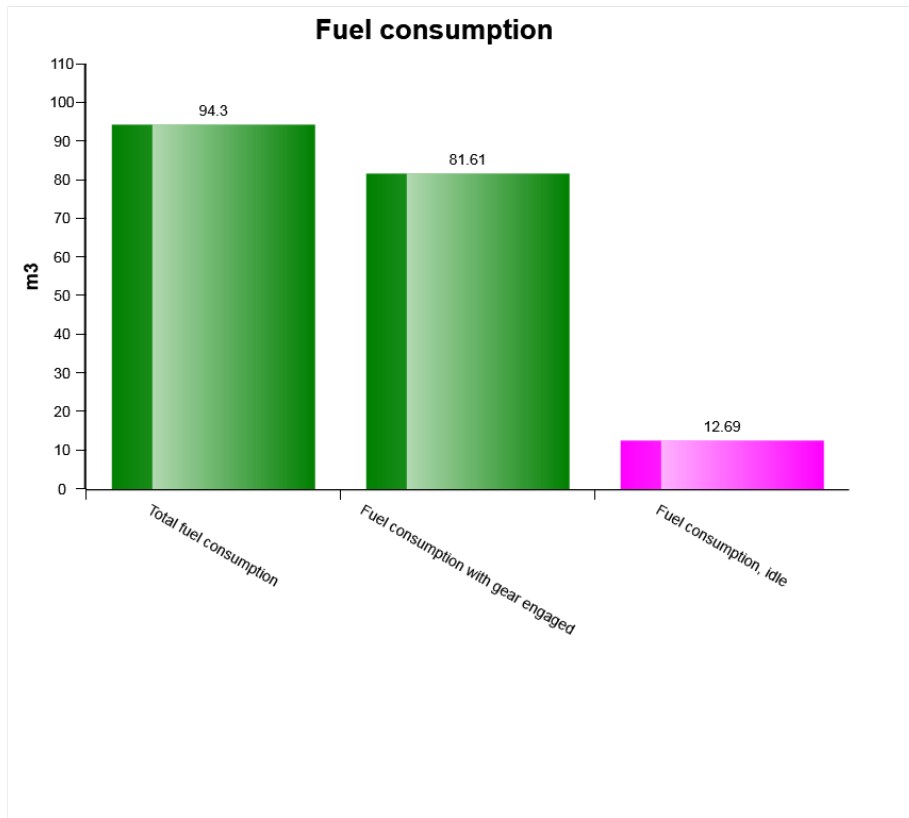


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L110H	10290	9453.1	7/23/2018

Main equipment	Type	Equipment
	Tyre size/class	
	Main Attachment	
	Extra Counterweight	
	Ballast	
	Chains	
	Boom Suspension System	
	Attachment Interface	
	Volume m3 (yd3) / Area m2 (ft2)	
	Attachment make	



Machine model	SerialNo	Operating Hours	Reading Date
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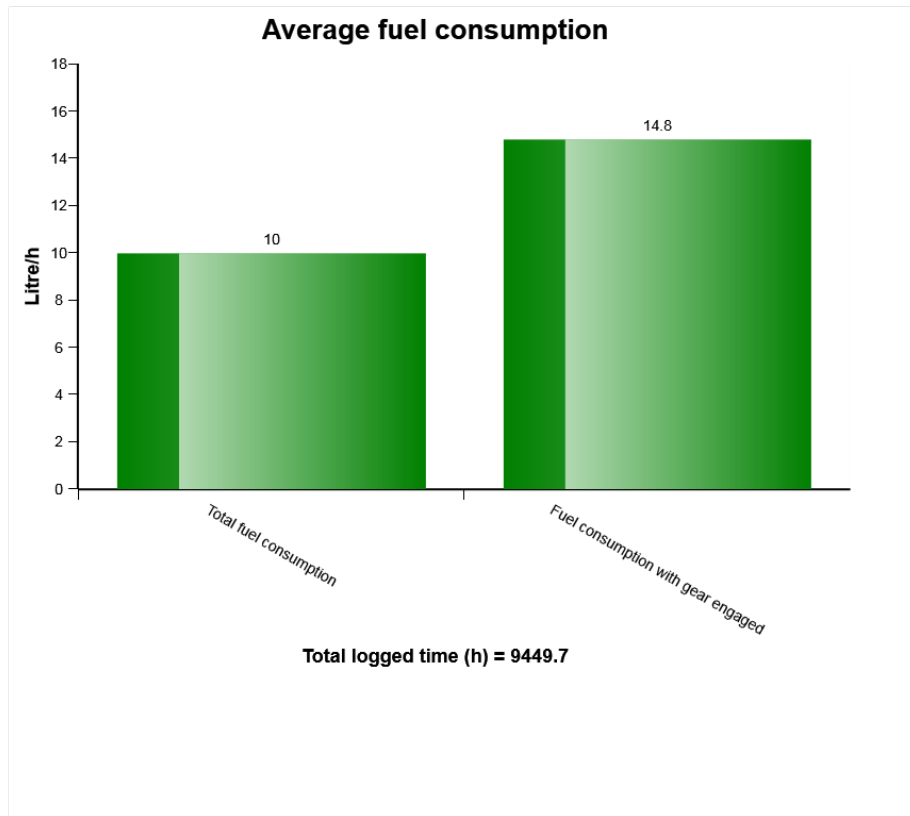


The diagram shows the total fuel consumption, fuel consumption with gear engaged and fuel consumption during idle.

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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

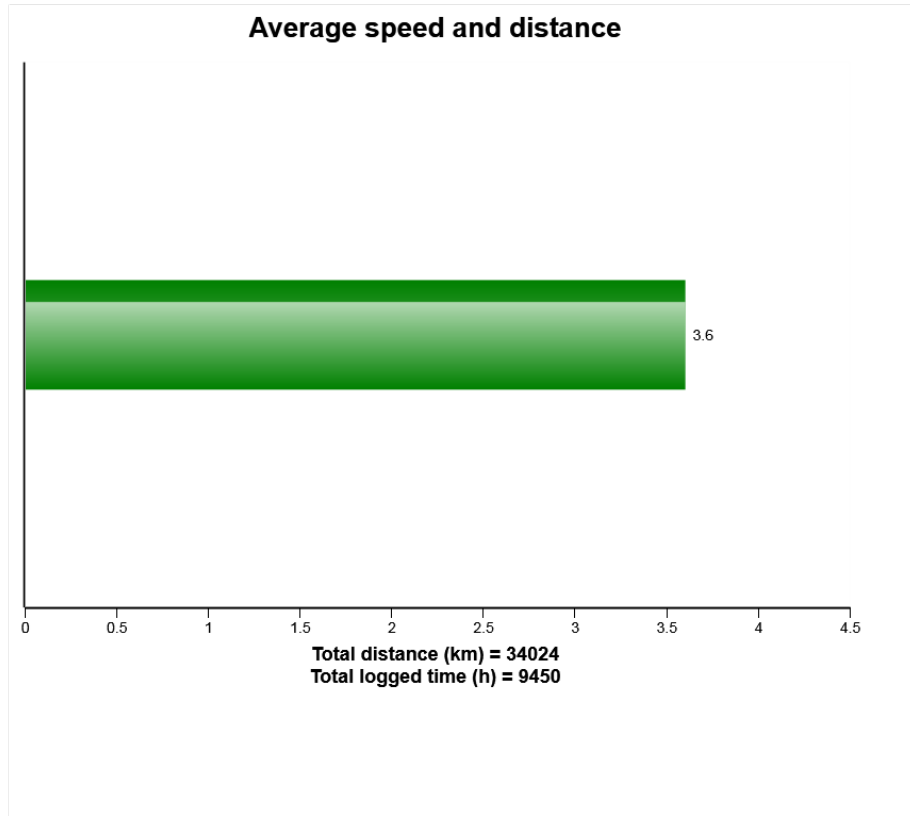


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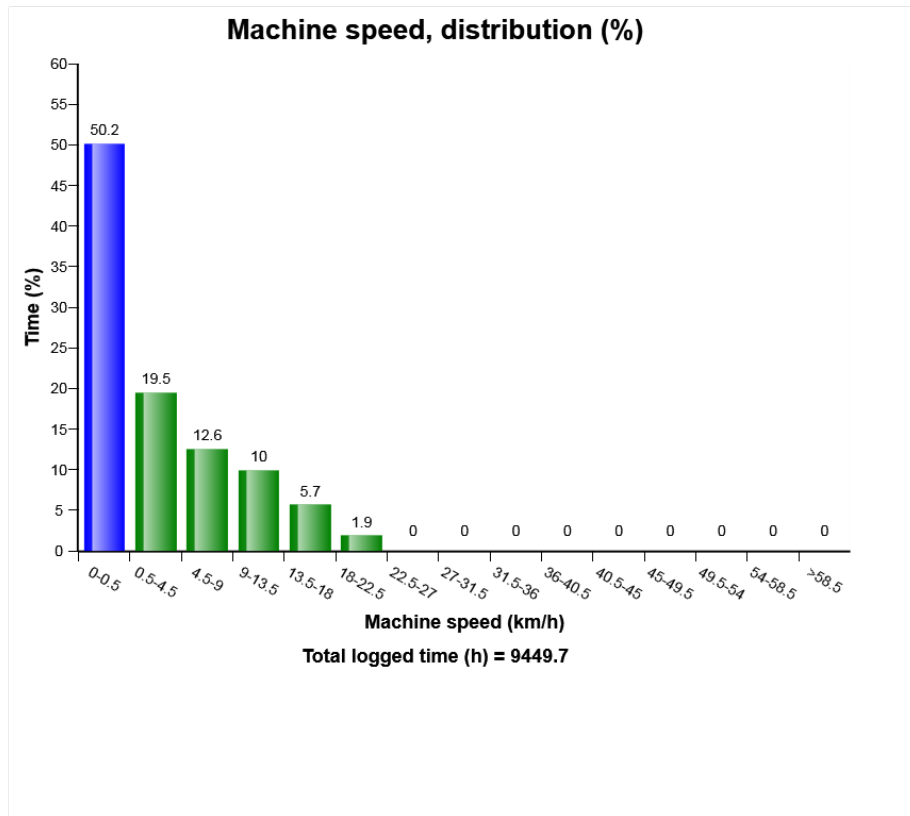
Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the machines average speed based on the total operating hours.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



Definition:

This graph describes the machine speed distribution.

The sum of all bars = 100% of machine speed time.

Under the graph total time with engine on, in hours, is displayed.

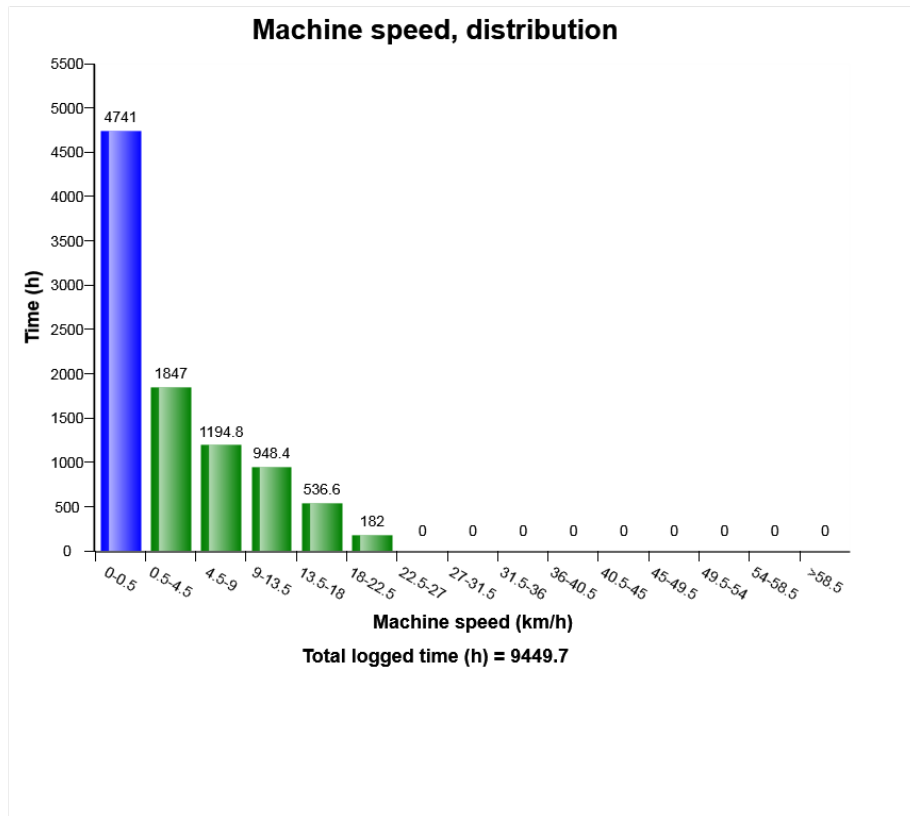
Explanation:

Y-axis: Time, specified for each speed interval.

X-axis: Machine speed, divided into speed intervals.



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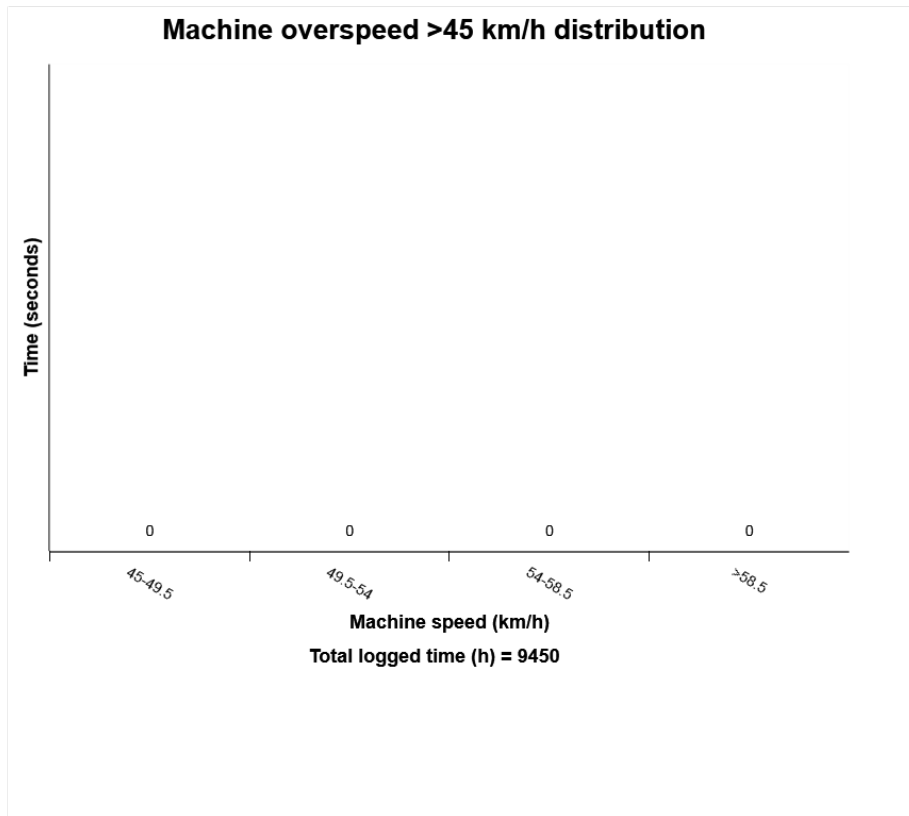
Explanation:

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Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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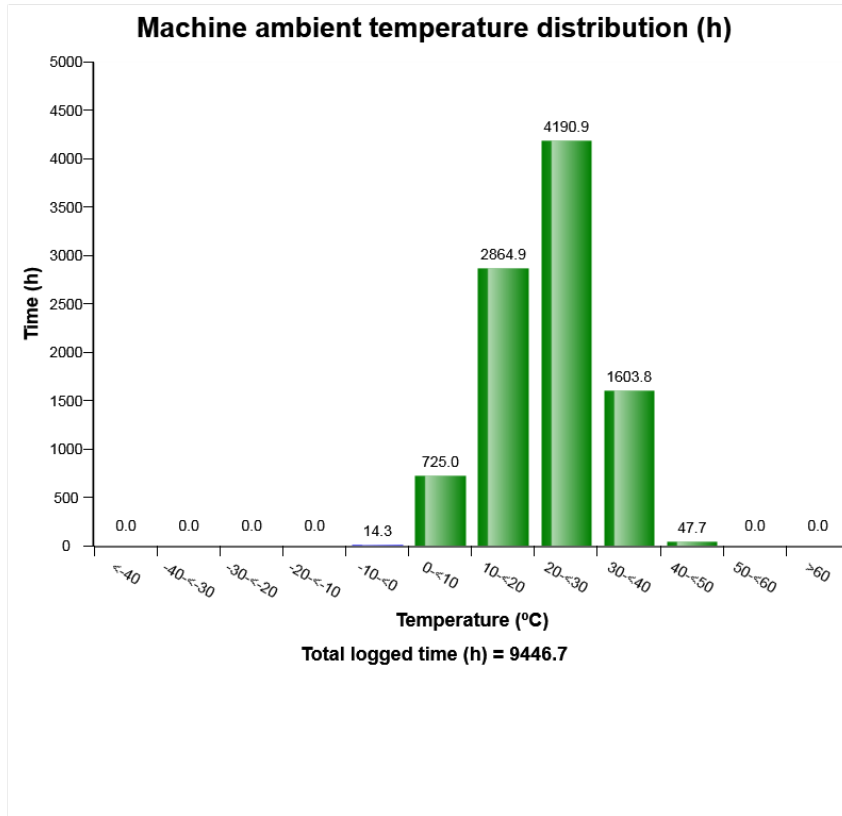
Explanation:

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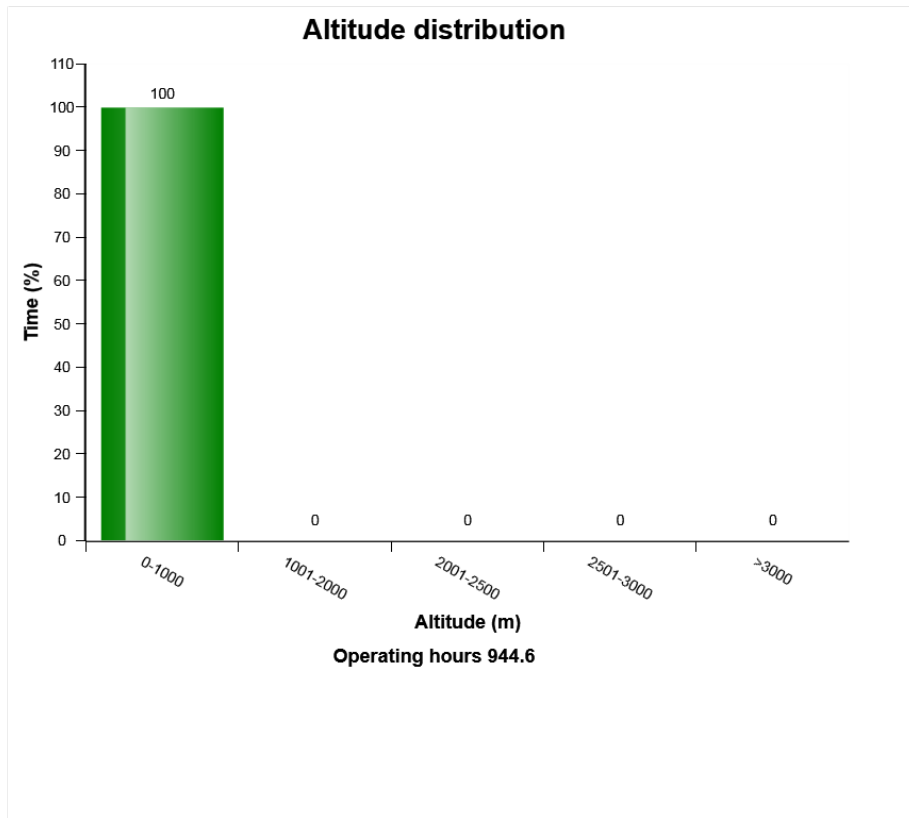


Definition:

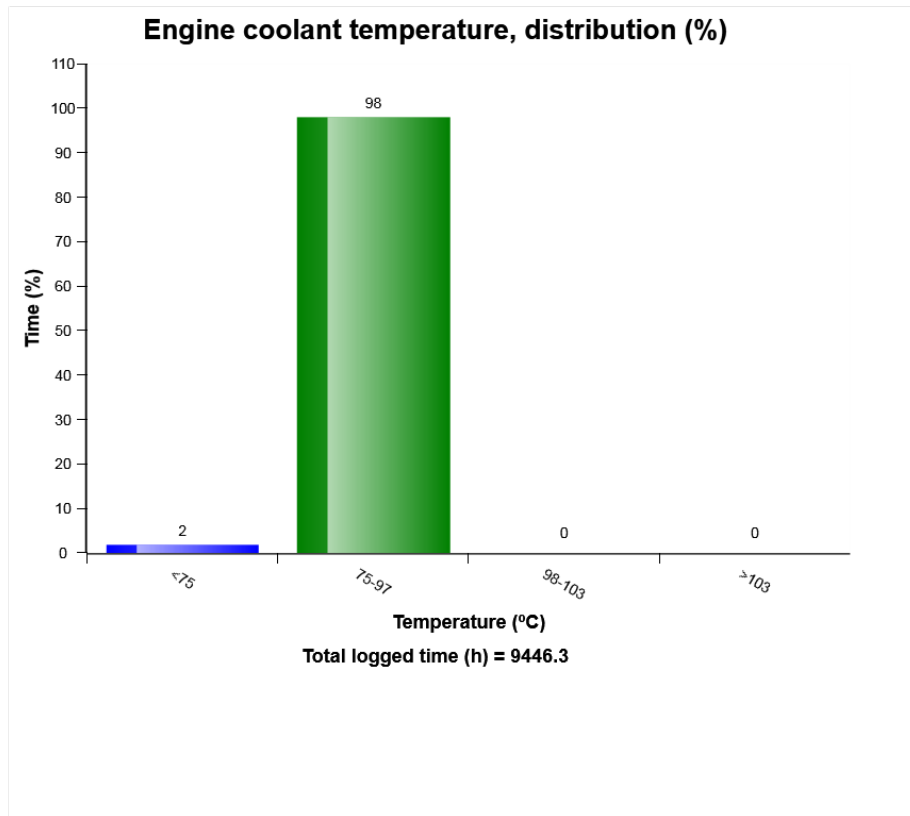
The diagram describes ambient temperature distribution of the machine while machine operates.



Machine model	SerialNo	Operating Hours	Reading Date
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Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

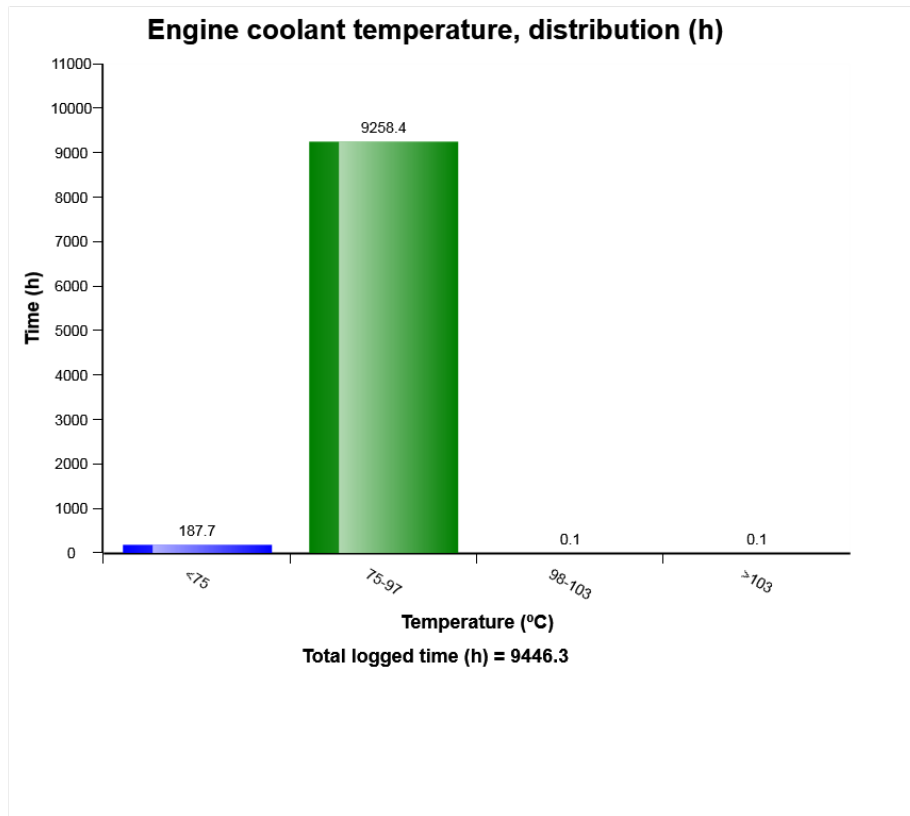
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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
L110H	10290	9453.1	7/23/2018



Definition:

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

Explanation:

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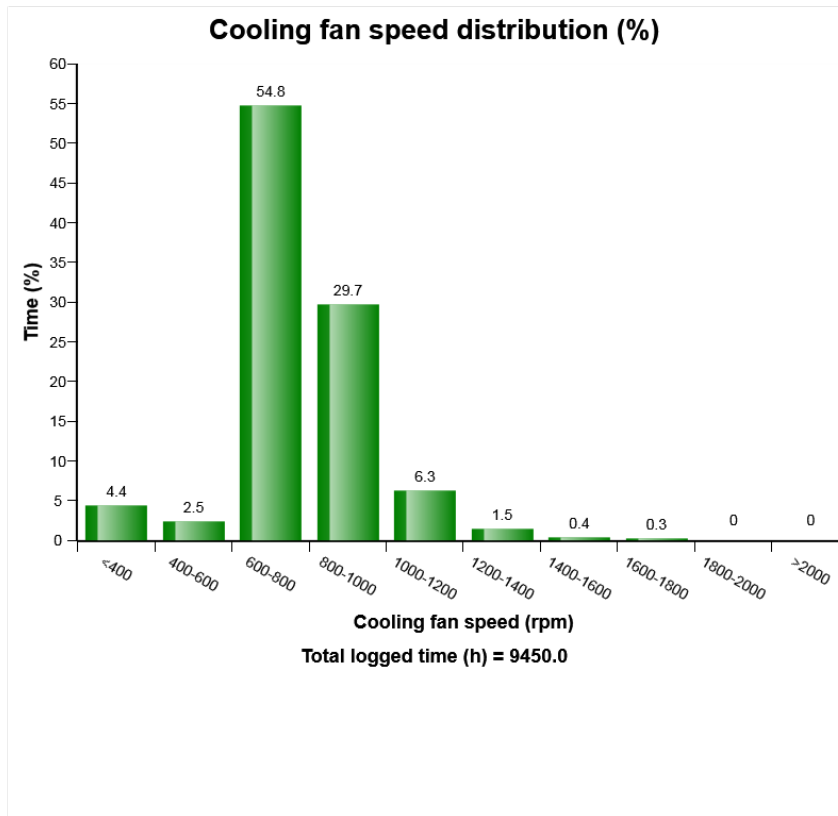
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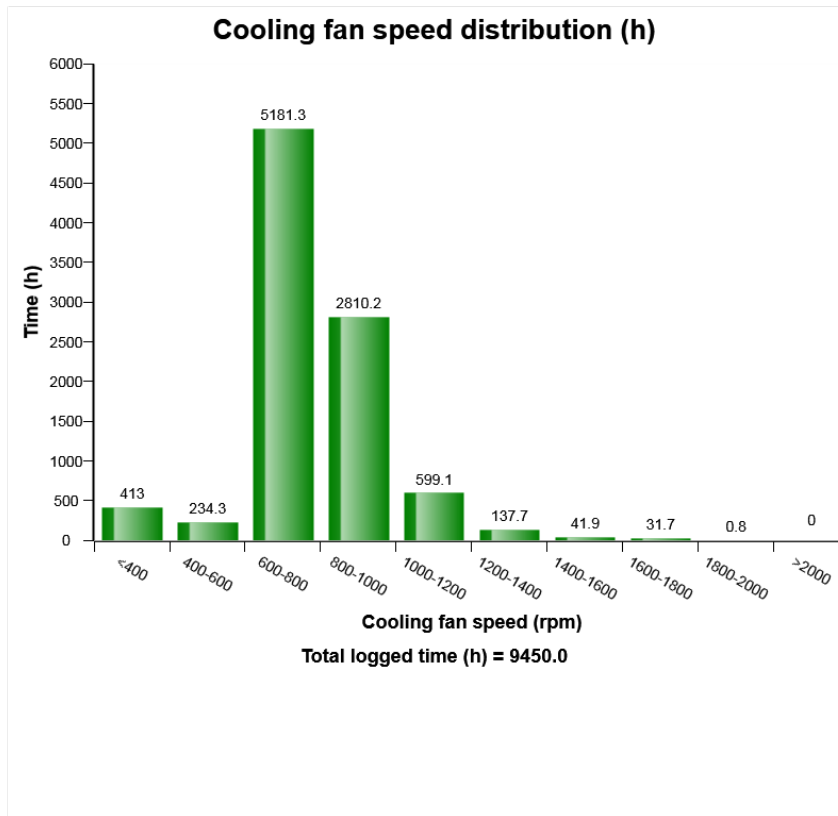
Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



The diagram shows the time distribution for the cooling fan in different rpm ranges.



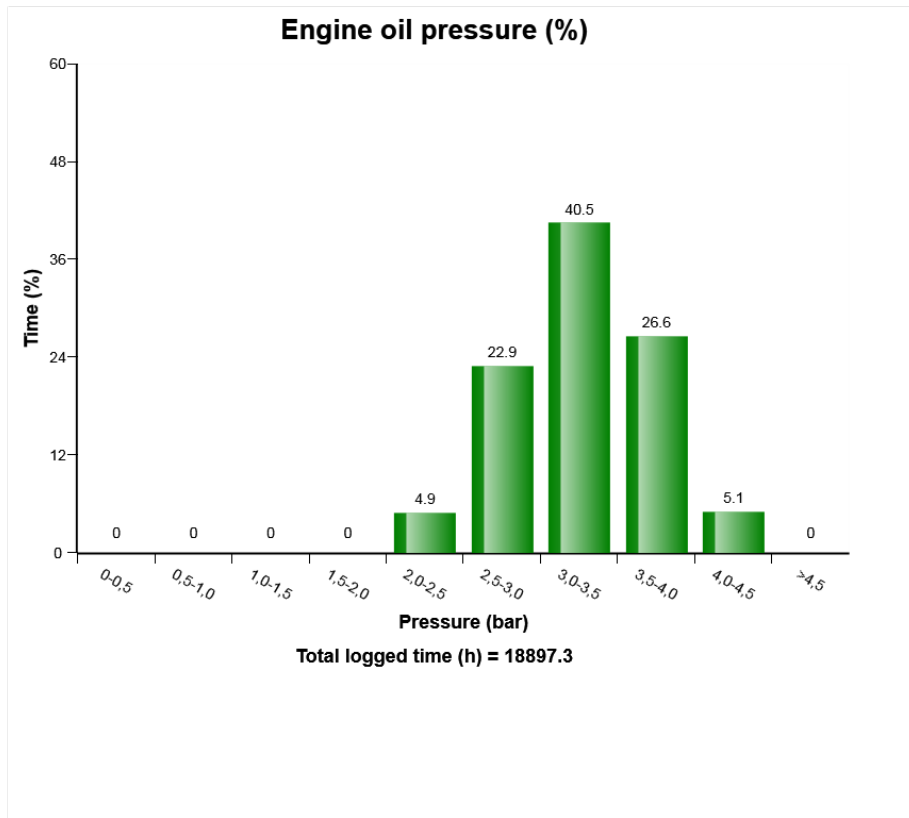
Machine model	SerialNo	Operating Hours	Reading Date
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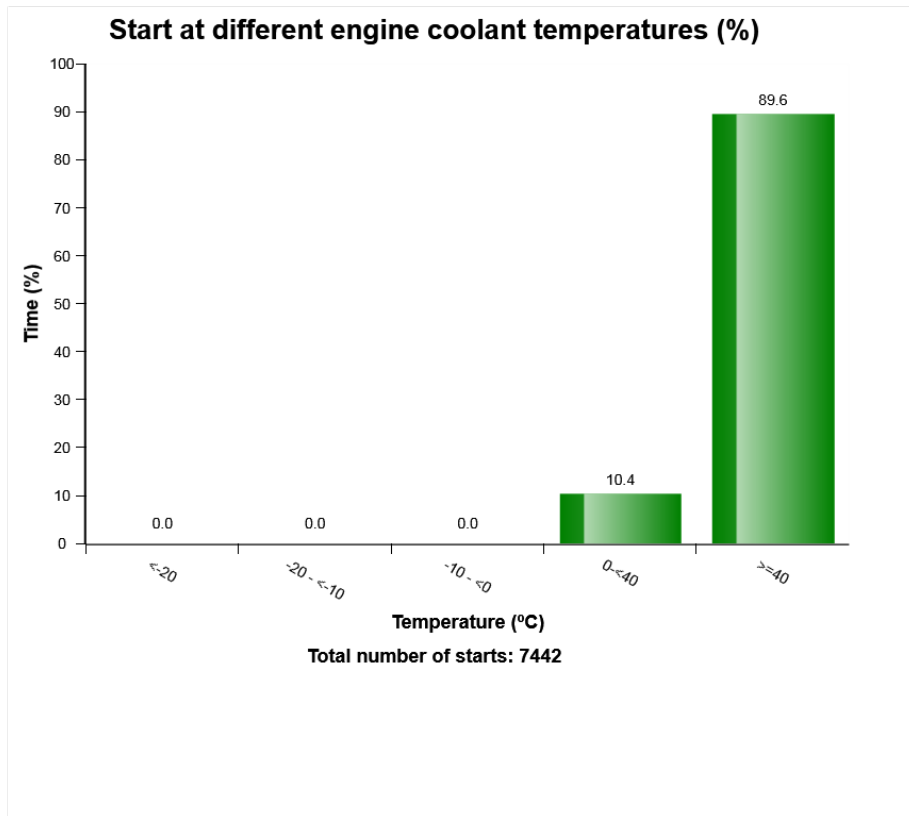
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L110H	10290	9453.1	7/23/2018



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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.



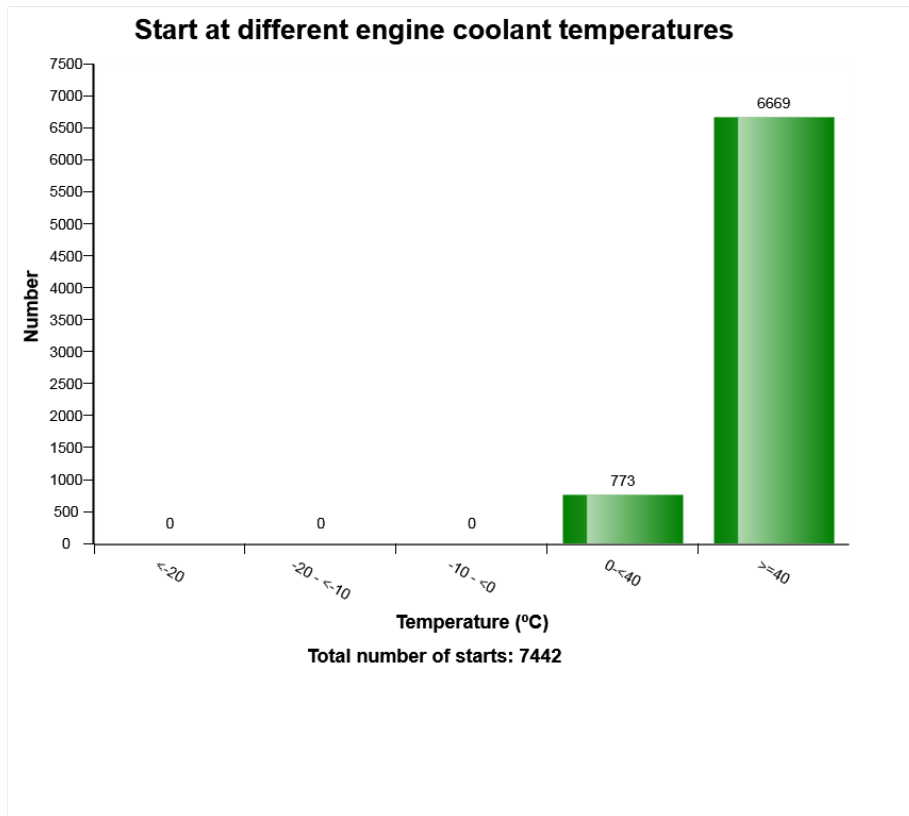
Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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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L110H	10290	9453.1	7/23/2018



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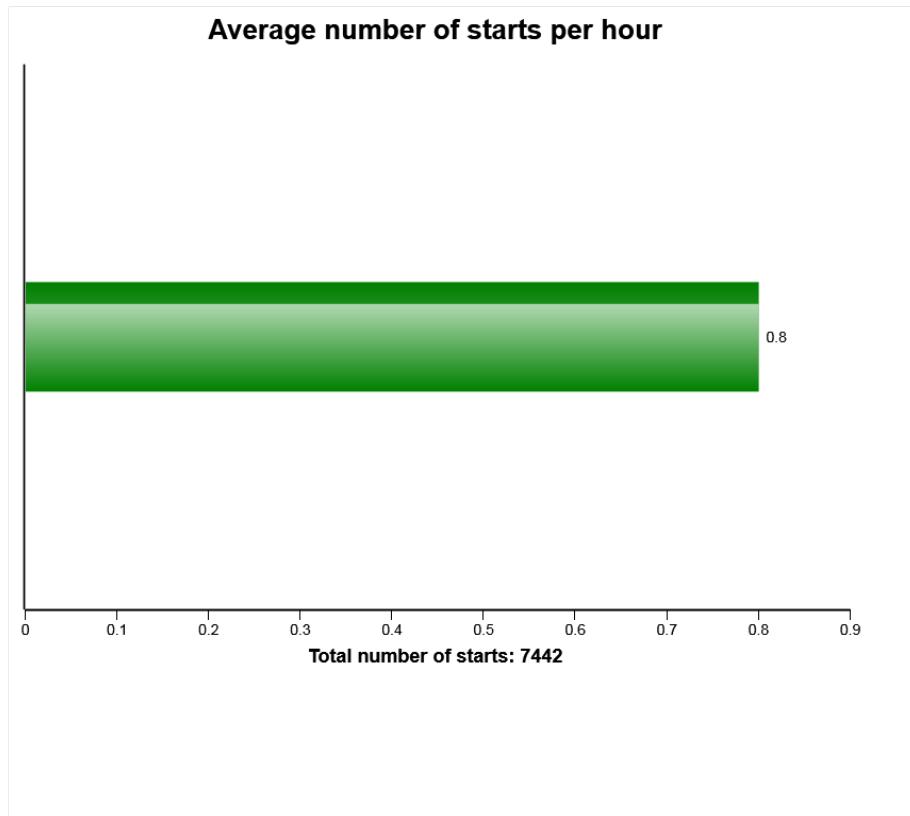
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Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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.



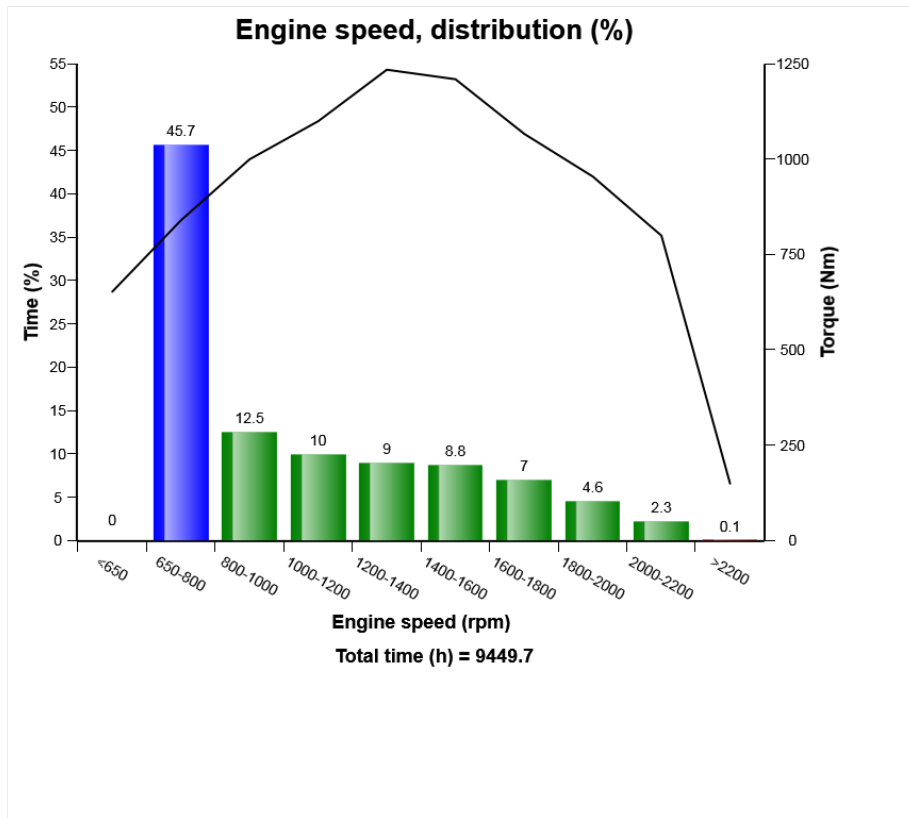
Machine model	SerialNo	Operating Hours	Reading Date
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To see at which different temperatures engine is started see" Start at different engine temperatures."

Green bar = Number of average starts per hour



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



Definition:

The graph describes the engine speed distribution, compared with the engine torque curve.

The sum of all bars = total time of engine running.

Explanation:

Y-axis_1: Engine running time.

Y-axis_2: Torque (Nm)

X-axis: Engine speed in rpm.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

□

Black curve = Engine torque curve. The highest part of the torque curve points out at which engine speed that the engine is strongest. To use the machine most efficient, keep the engine speed in the highest part of the torque curve. See below examples:

Blue bar = Idling interval.

Green bars = Normal engine speed range.

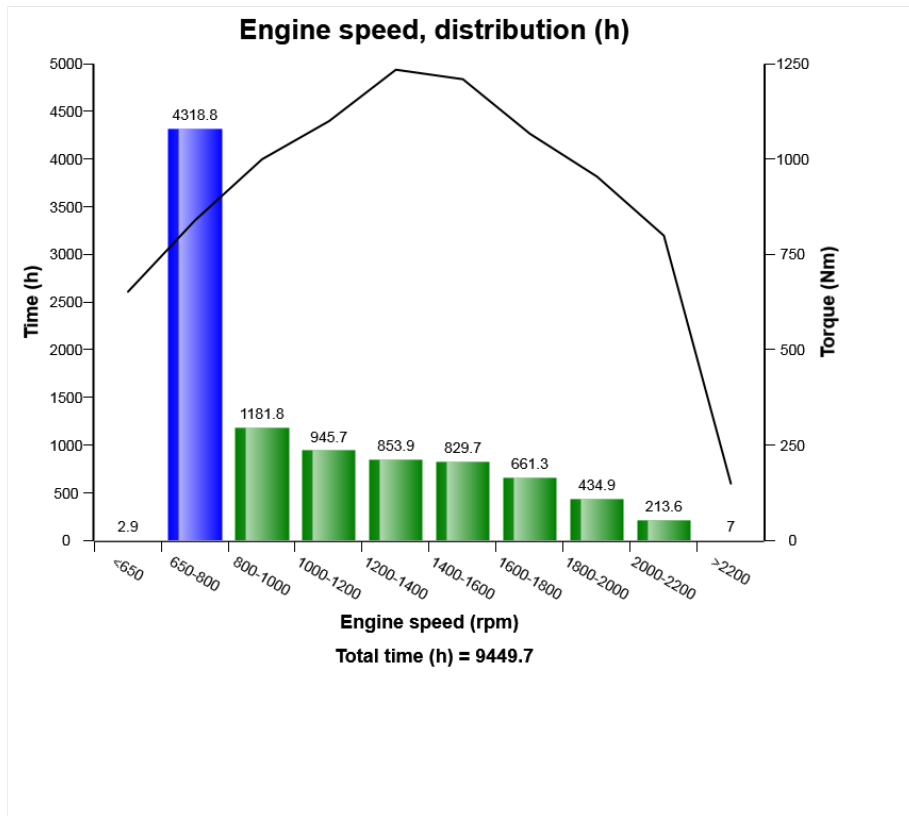
Red bar =The engine speed has exceeded the maximum design speed.

Never exceed the maximum engine design speed .

Exceeding the maximum design speed may cause severe damage to the engine.



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L110H	10290	9453.1	7/23/2018

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
L110H	10290	9453.1	7/23/2018

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

Criteria :

In order for an occurrence of low engine oil level to be recorded in a data point and the count to increment by 1, an Alarm shall have been received at start up of machine



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L110H	10290	9453.1	7/23/2018

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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 engine oil pressure to be recorded in a data point and the count to increment by 1, the engine 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."



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Only one event per minute is registered.

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Duration :

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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.



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Extreme value :

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Criteria :

Logging is performed when, Alarm high hydraulic oil temperature , is active.



Machine model	SerialNo	Operating Hours	Reading Date
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Regeneration ignored
Total number of occurrences = 1536

	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
*	5161	2022	20	2	17	110	63
*	6194	2023	20	2	17	119	5
*	11051	2013	3	7	17	0	0
*	12045	2011	12	2	17	119	5
*	13877	2011	12	3	17	27	40



Machine model	SerialNo	Operating Hours	Reading Date
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Regeneration duration
Total number of occurrences = 3840

	Op hours	Year	Month	Day	Hour	Minute	Duration (min)
*	303	2019	7	10	16	106	39
*	524	2000	7	11	16	53	39
*	2049	2002	21	11	16	14	39
*	3328	2011	12	2	17	114	39
*	3603	2016	20	12	16	54	39
*	5907	2010	2	11	16	218	39
*	6183	2016	11	10	16	235	39
*	8997	2001	21	10	16	137	39
*	9269	2001	16	10	16	192	39
*	9776	2000	9	12	16	142	39
*	10012	2012	26	11	16	56	39
*	10537	2012	11	10	16	142	4
*	11045	2018	1	12	16	60	39
*	12090	2019	13	12	16	12	39
*	12557	2015	11	11	16	51	39
*	12838	2022	20	2	17	115	39
*	13096	2013	3	7	17	183	39
*	13877	2011	12	3	17	27	40
*	14100	2008	11	10	16	121	17
*	14377	2004	17	10	17	124	40



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hours is displayed in the first column, followed by year, month, day, hour and minute to show when an event has occurred.

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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 :

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.



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



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Extreme value :

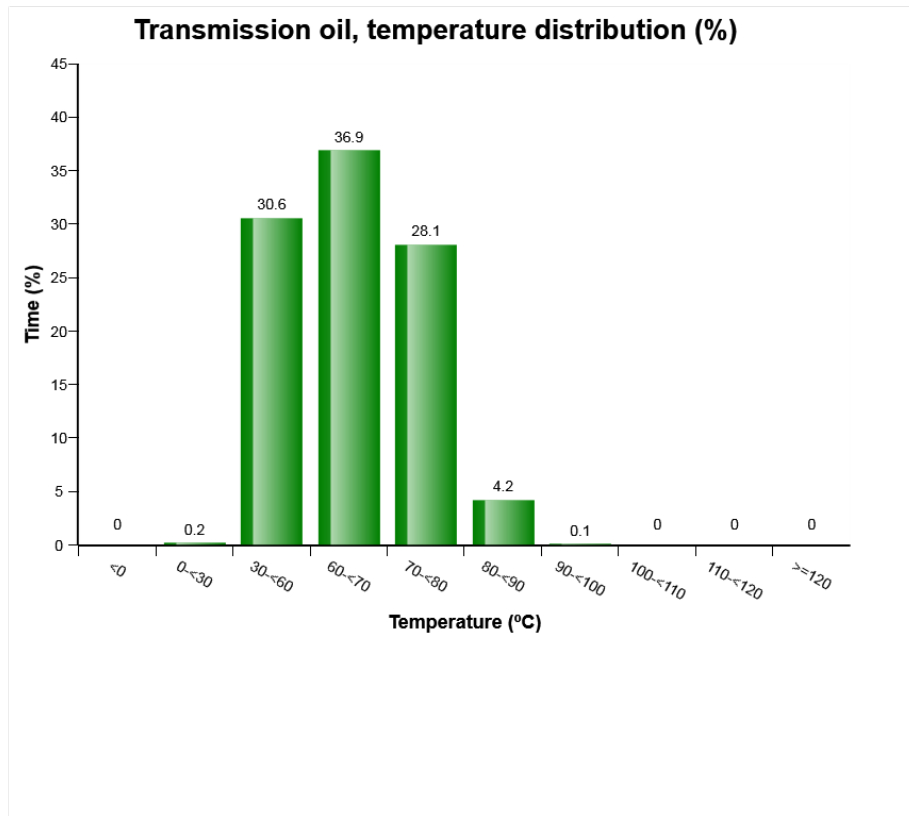
The extreme value column displays the most extreme value during the event.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
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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:

<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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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

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

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

≥120°C Temperatures over 120°C

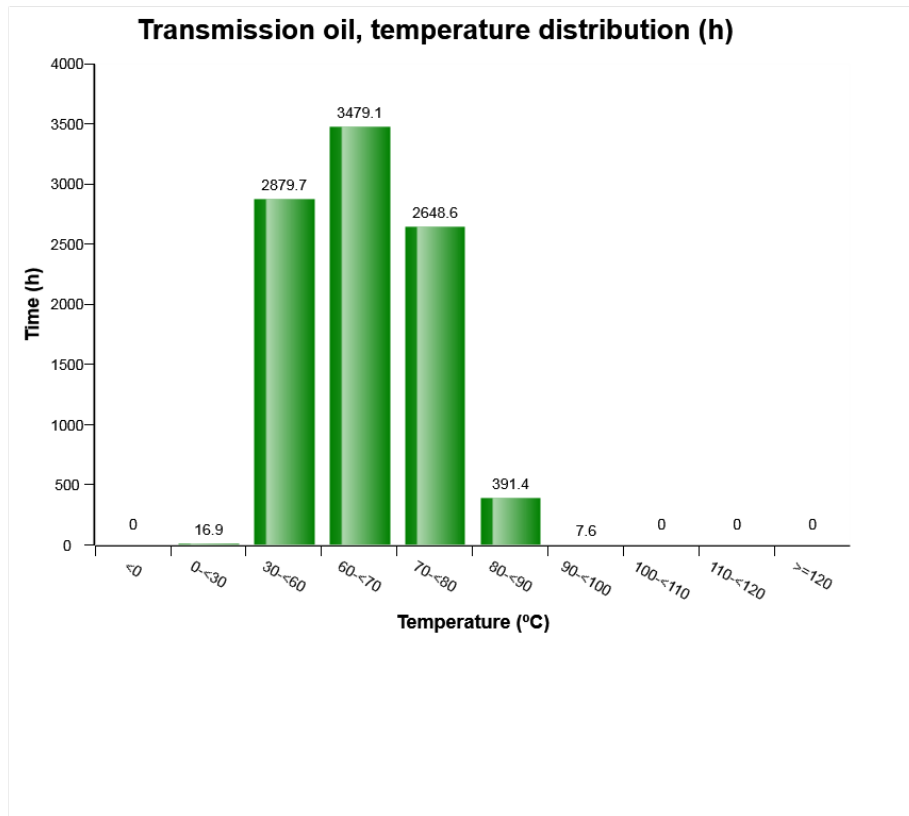
The bar that describes temperatures from 110°C until 120°C is yellow and means that the oil has begun to be overheated. Driver has been given orange central warning

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



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L110H	10290	9453.1	7/23/2018



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<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



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

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

≥120°C Temperatures over 120°C

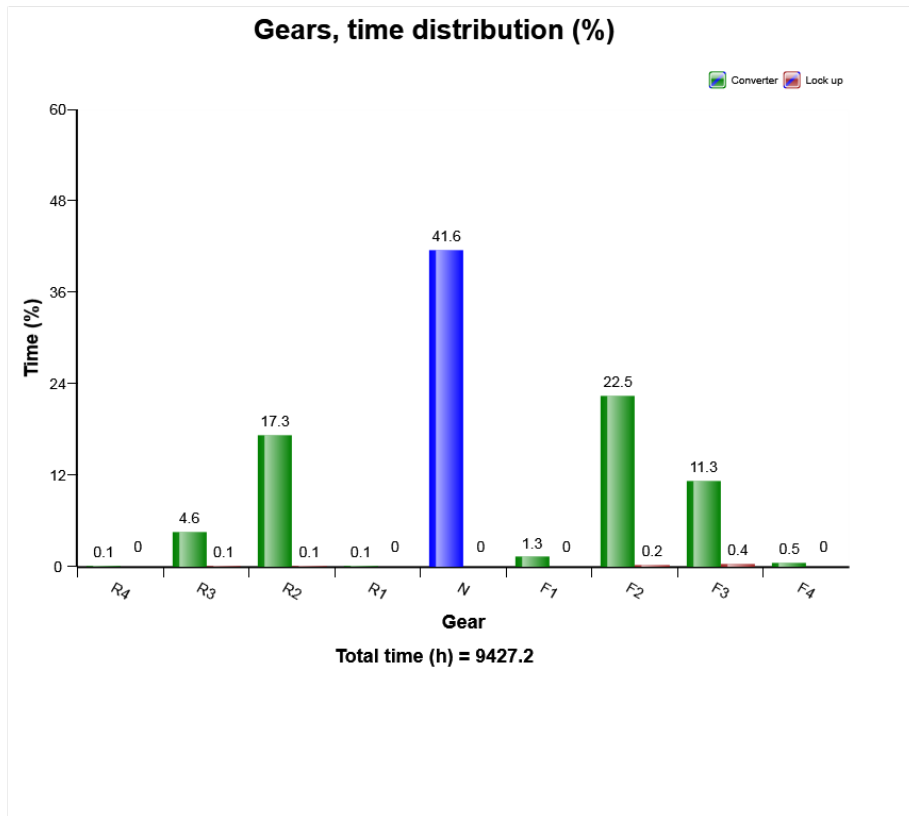
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Definition:

The graph describes the distribution of the usage of the different gears, expressed as percentage of total engine running time.

The sum of all bars = 100% = total engine running time.

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

Explanation:

Y-axis: Engine running time, in percent.

X-axis: Active gear.



Machine model	SerialNo	Operating Hours	Reading Date
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Green bars:

R1 = First reverse gear

R2 = Second reverse gear

R3 = Third reverse gear

R4 =Fourth reverse gear

N = Neutral position

F1=First forward gear

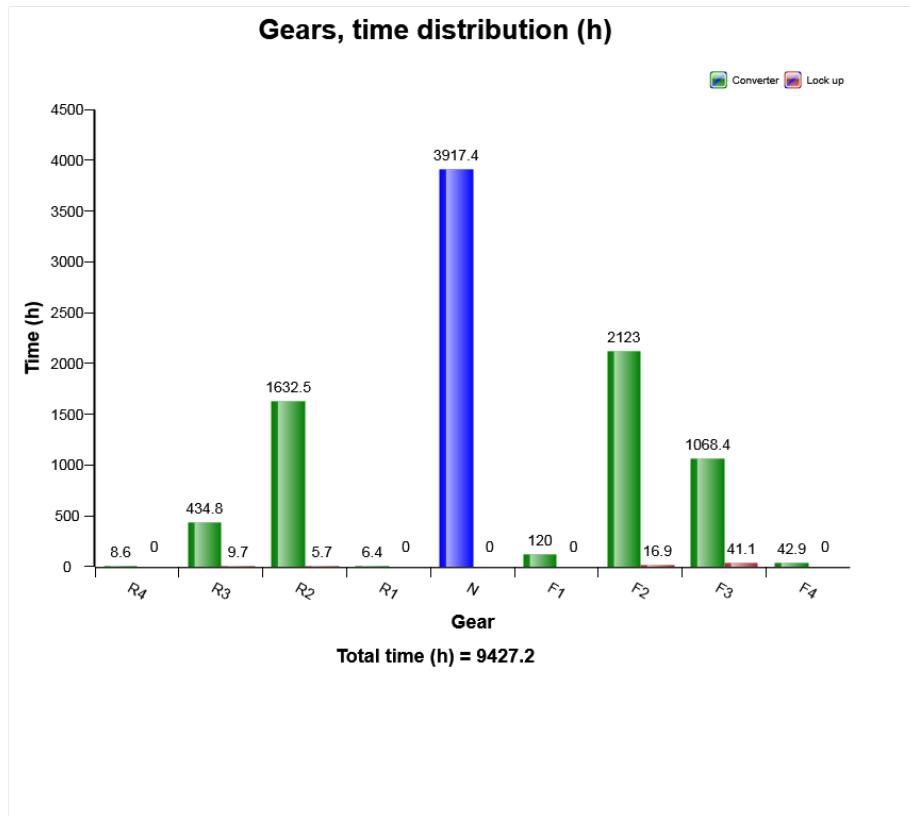
F2=Second forward gear

F3=Third forward gear

F4=Fourth forward gear



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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The graph describes the distribution of the usage of the different gears, expressed as total running time for each gear..

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

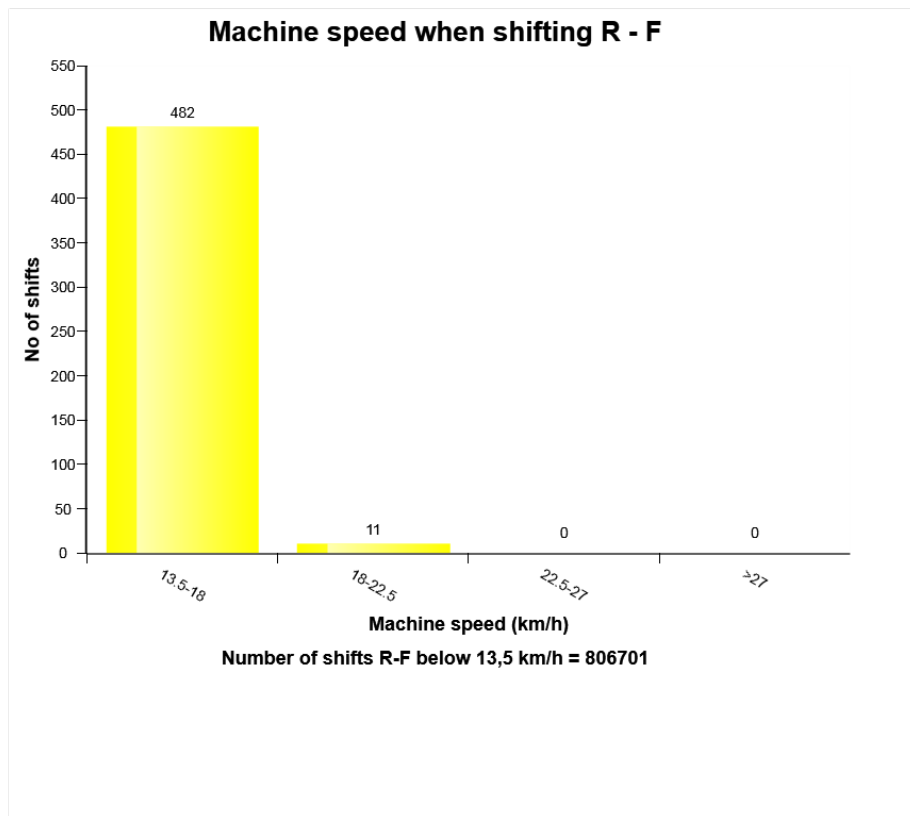
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Definition:

The graph shows the machine speed at direction shift, reverse to forward (R-F)

Explanation:

Y-axis: Number of shifts (reverse-forward)

X-axis: Machine speed in mph.

Under the graph the total number of directional gear shifts R-F below 8,4 mph is displayed. Below the diagram the total number of gearshifts is displayed.

Transmission wear depends on current speed when shifting direction. Less machine speed when



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shifting direction generally causes less wear on the transmission.

Yellow bar = From 8.4 mph to 11.2 mph

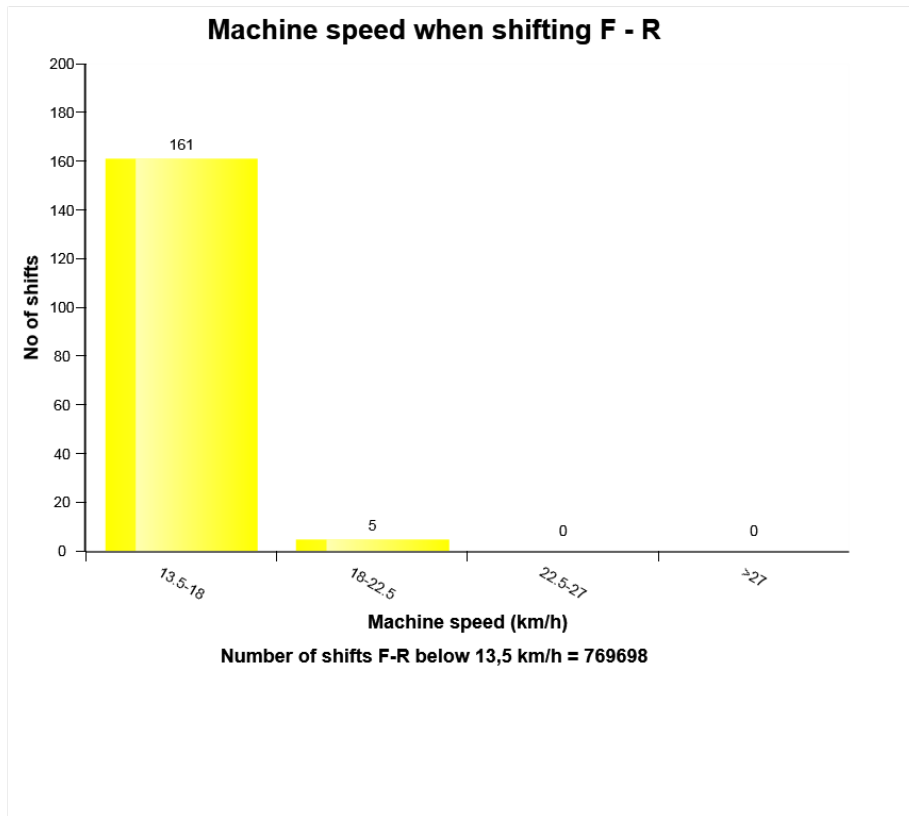
Red bar = From 11.2 mph to 14.0 mph

Red bar = From 14.0 mph to 16.8 mph

Red bar = Over 16.8 mph



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Under the graph the total number of directional gear shifts R-F below 8,4 mph is displayed. Below the diagram the total number of gearshifts is displayed.

Transmission wear depends on current speed when shifting direction. Less machine speed when



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shifting direction generally causes less wear on the transmission.

Yellow bar = From 8.4 mph to 11.2 mph

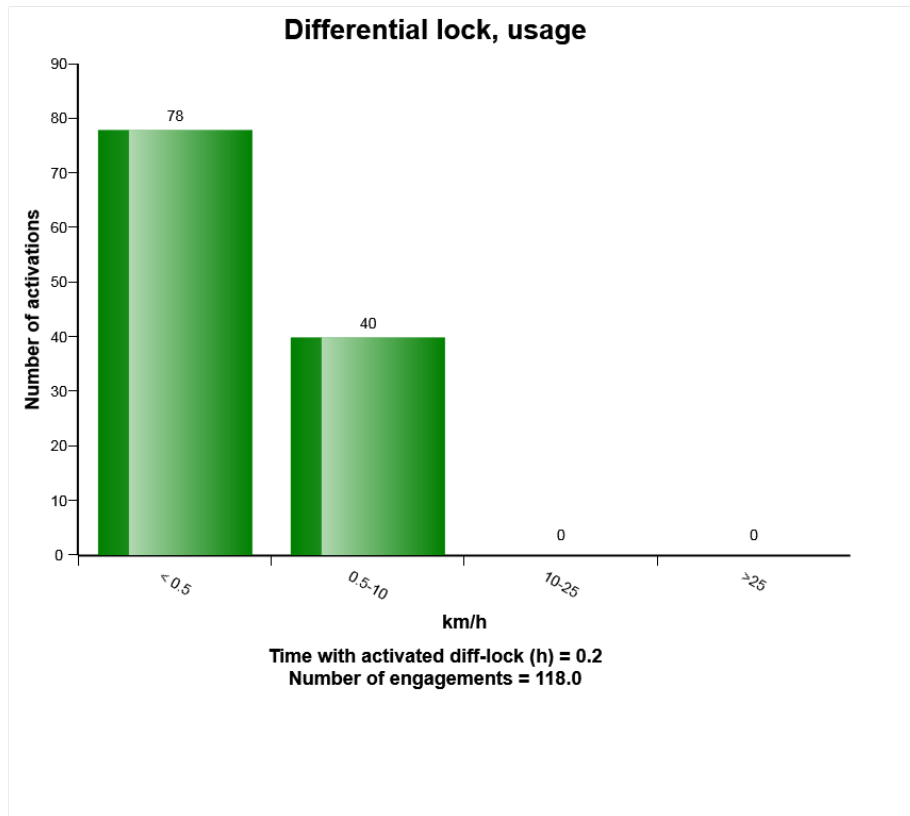
Red bar = From 11.2 mph to 14.0 mph

Red bar = From 14.0 mph to 16.8 mph

Red bar = Over 16.8 mph



Machine model	SerialNo	Operating Hours	Reading Date
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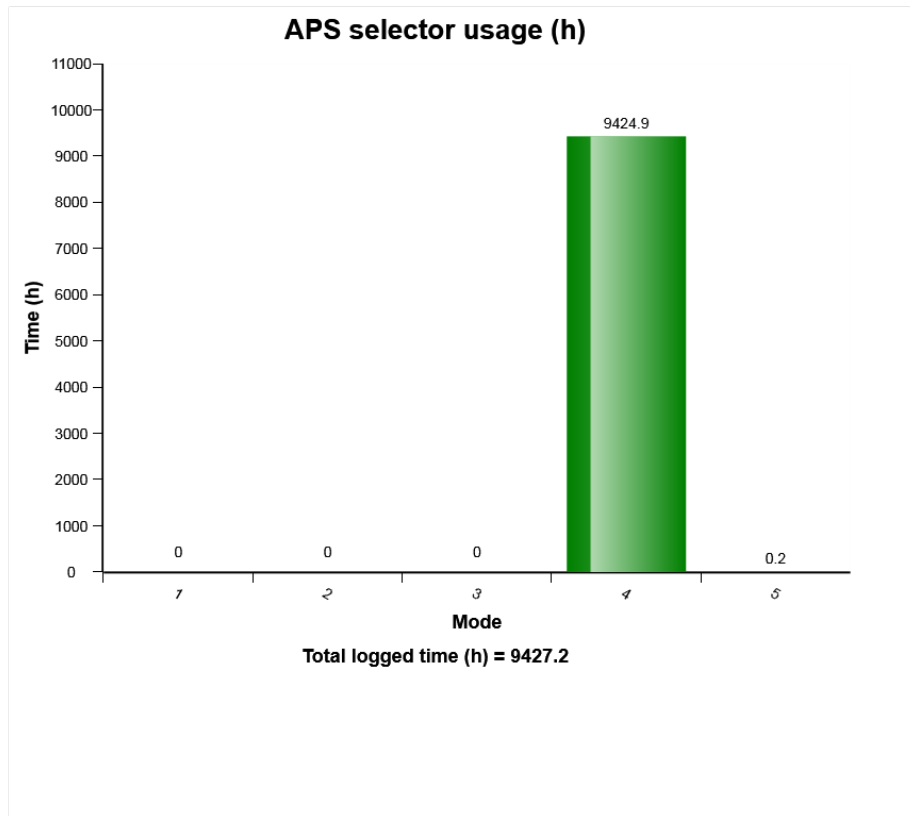


Definition:

The diagram show, number of times the differential lock has been engaged at each speed interval



Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the time distribution for the different APS modes.

For WLO :

Mode1 = Light

Mode2 = Normal

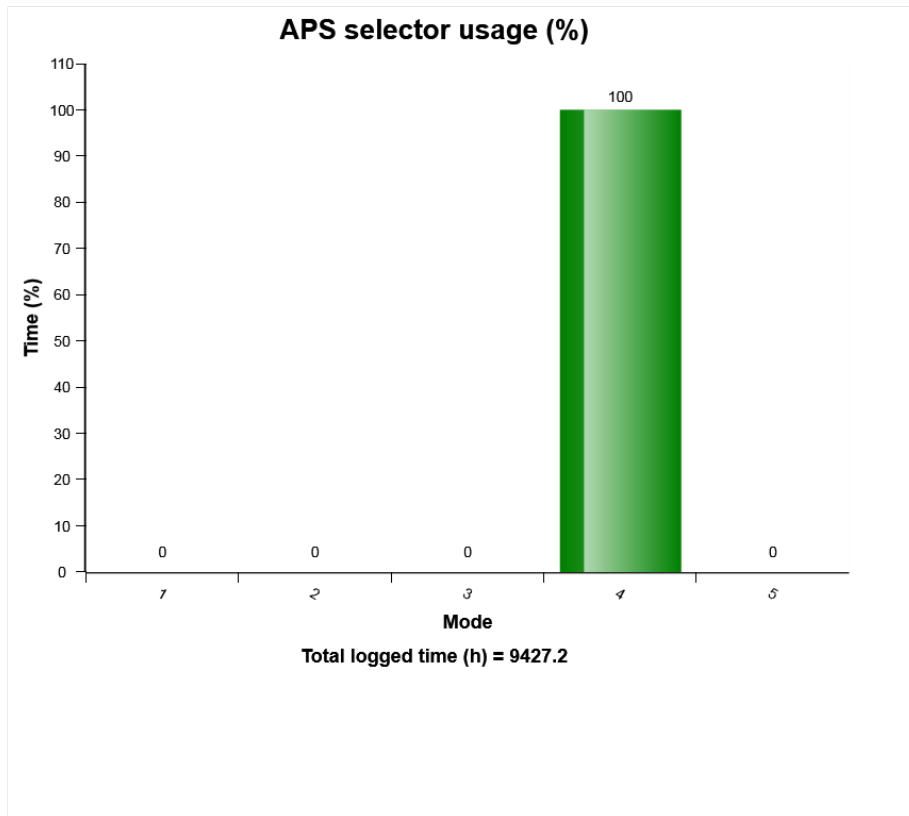
Mode3 = Heavy

Mode4 = Auto

Mode5 = Service.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



The diagram shows the time distribution for the different APS modes.

For WLO :

Mode1 = Light

Mode2 = Normal

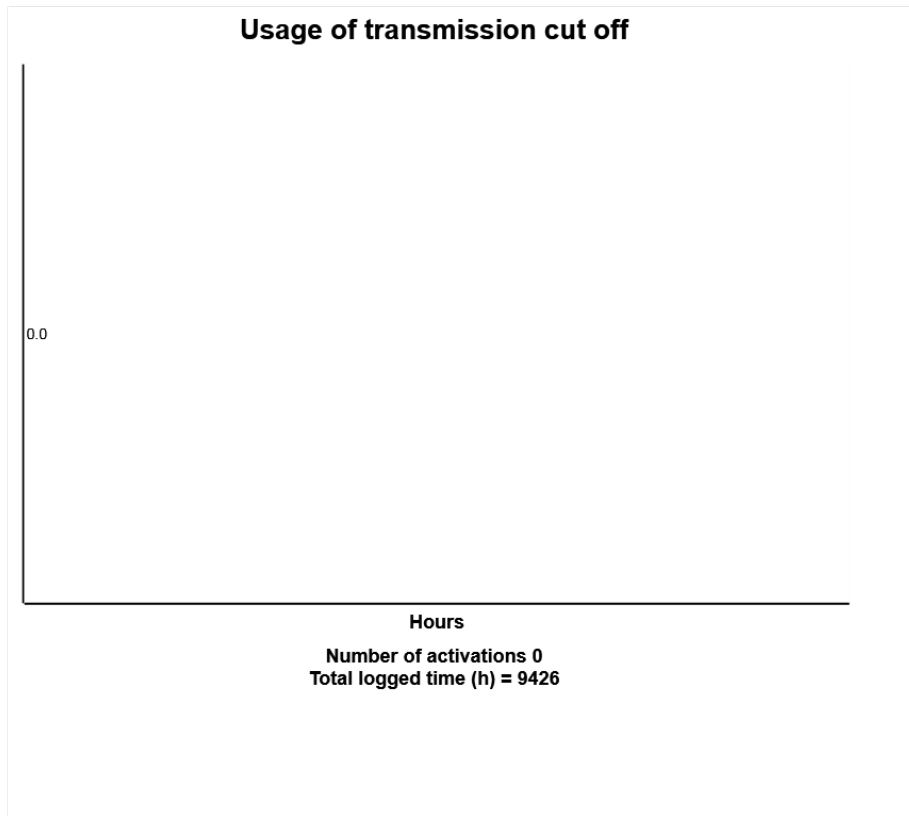
Mode3 = Heavy

Mode4 = Auto

Mode5 = Service.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

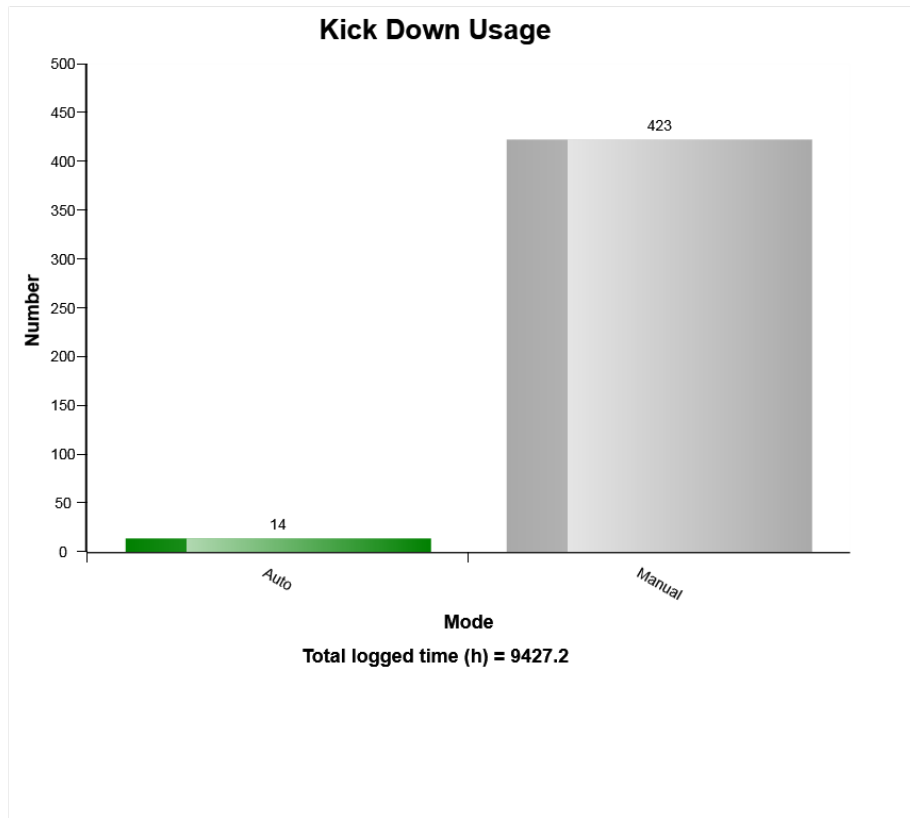


The diagram shows the time that the transmission cut off has been ON.

Below the diagram total number of activations is presented.



Machine model	SerialNo	Operating Hours	Reading Date
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The diagram shows the distribution between Auto and Manual activations of the Kick down function.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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
L110H	10290	9453.1	7/23/2018

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 :

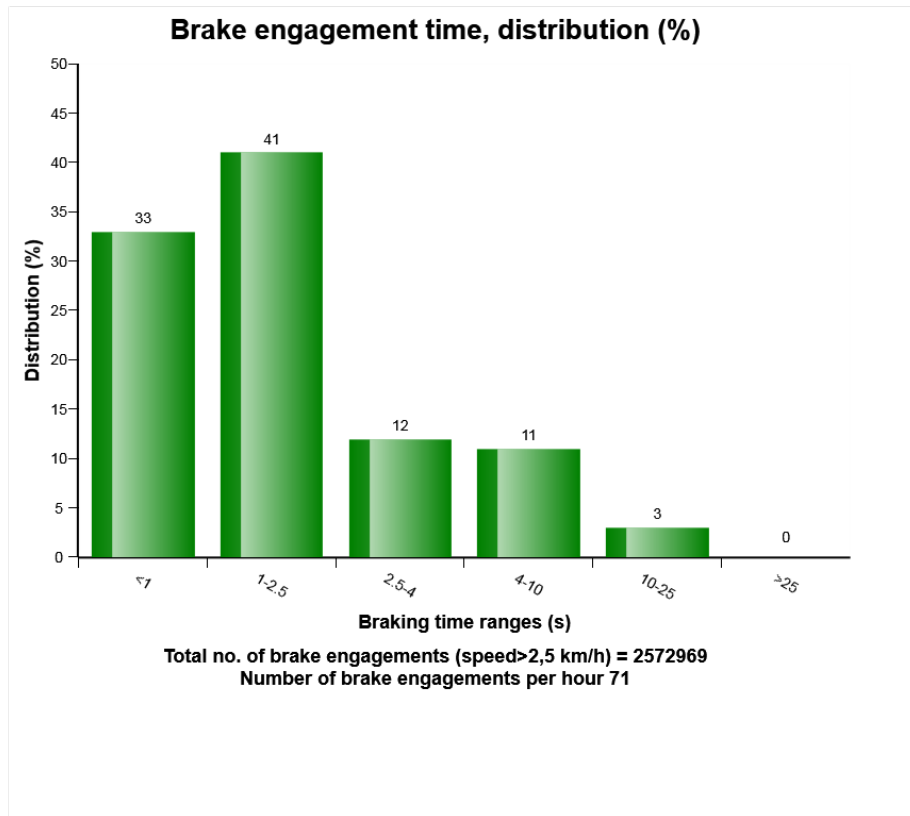
The extreme value column displays the most extreme value during the event.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



Definition:

The graph describes the duration of brake engagements: Distribution in percent.

This chart illustrates time with higher brake pressure than 5.0 bar (72.5 psi) and machine speed exceeding 2.5 km/h (1.55 mph).

The sum of bars=100% of brake engagements.

Explanation:

Y-axis: Percentage of times that the brake has been engaged in each class.

X-axis: Brake engagement time range in seconds.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

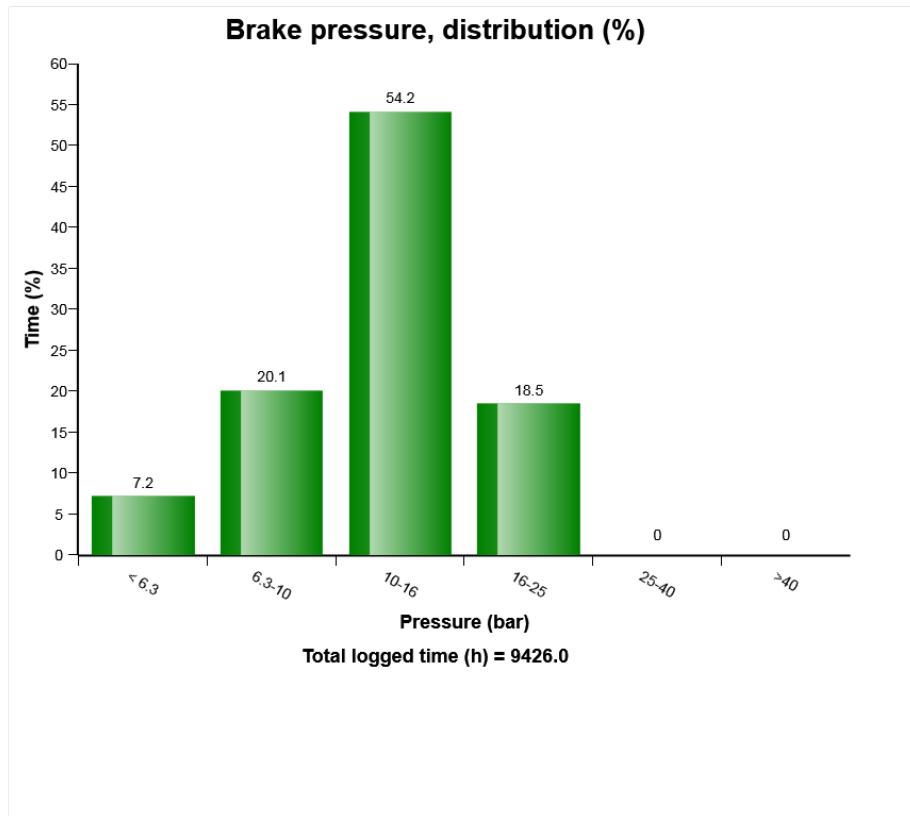
The distribution of the bars throughout the ranges reflects the operator's way of handling the machine.

To get a greater understanding of how the brake is used also study the presentation " *Brake pressure distribution*".

Green bars = Brake engagement duration in separate ranges



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



Definition:

The graph describes the brake pressure distribution.

The sum of bars=100% of brake engagements.

Explanation:

Y-axis: Percentage of times that the brake has been engaged.

X-axis: Brake pressure distribution in bar.

The distribution of the bars throughout the ranges reflects the operator's way of handling the machine. A concentration in the lower ranges indicates that the machine is being operated correctly.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

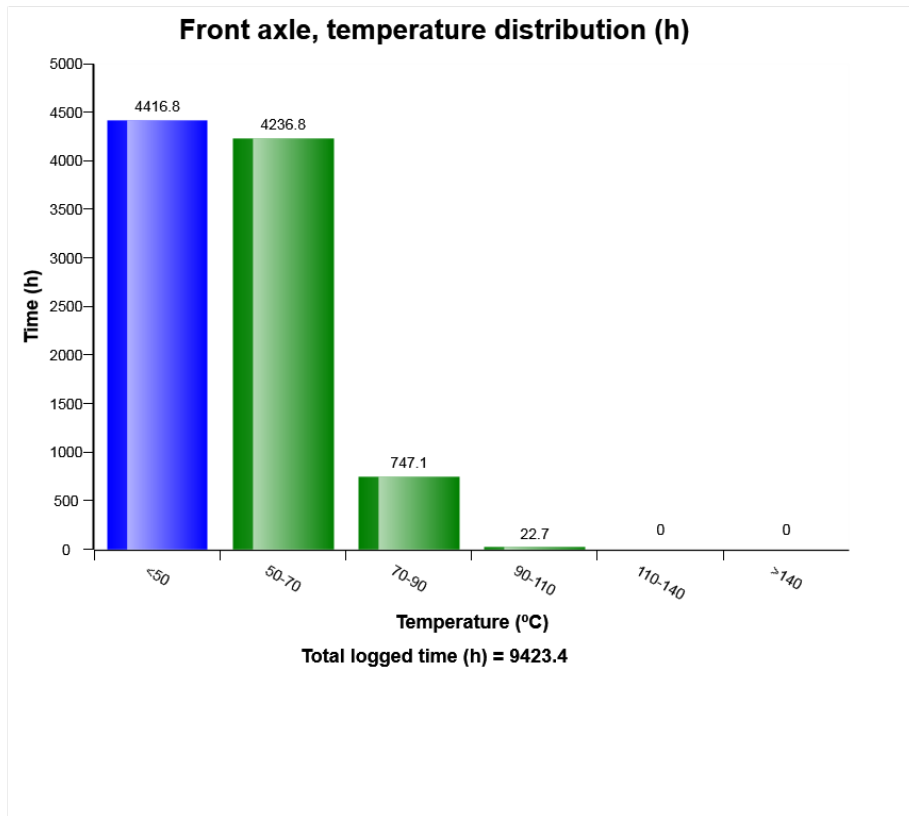
A concentration in the highest range indicates that the machine is operated hard and in an inefficient manner.

To get a greater understanding of how the brake is used also study the presentation "Brake engagement time".

Green bars = Brake pressure ranges



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

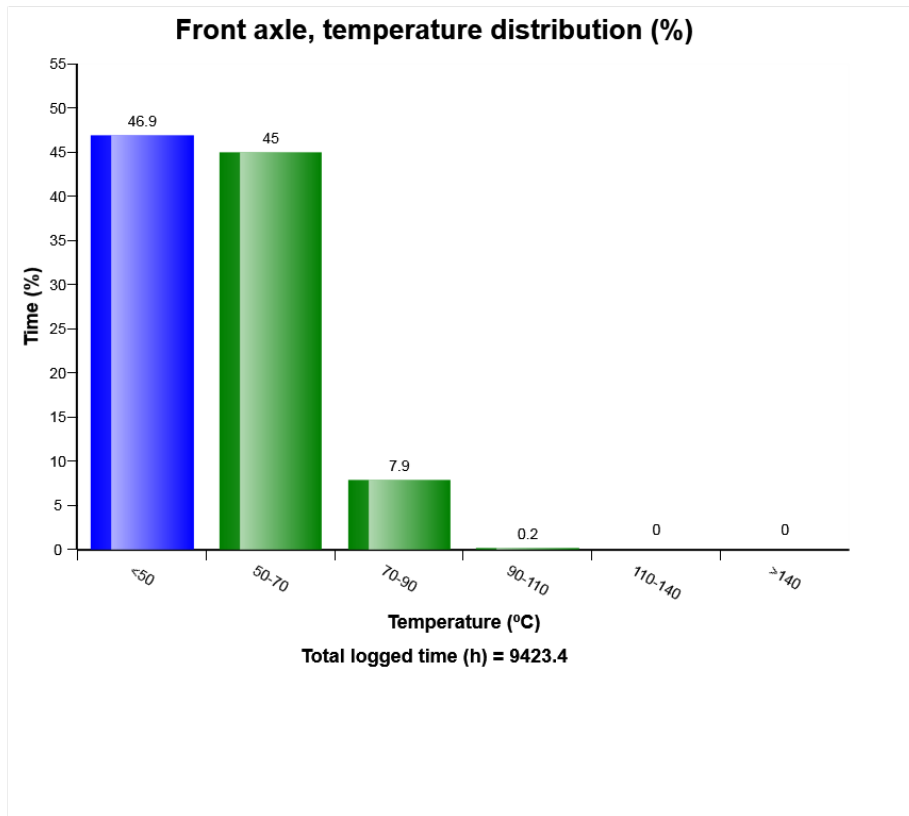
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

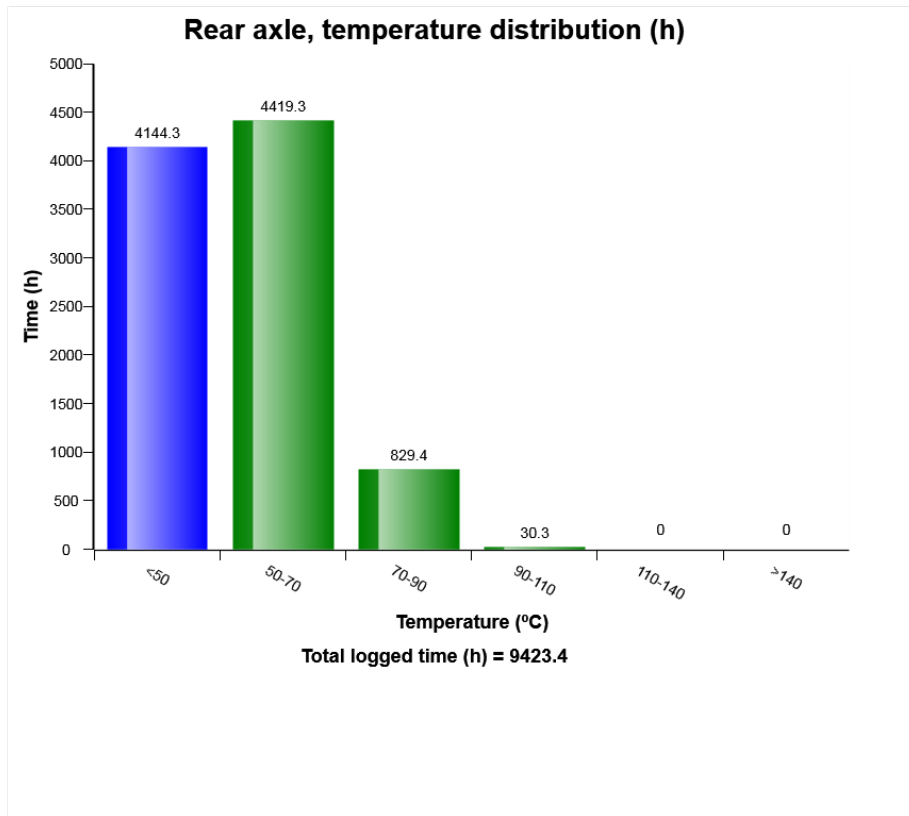
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

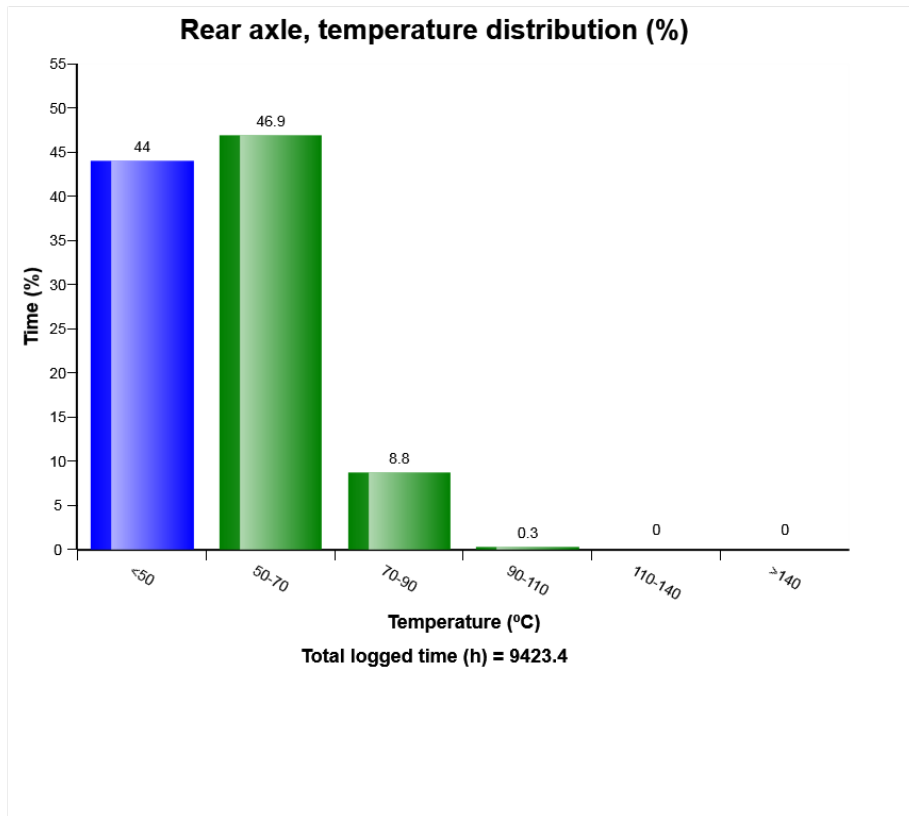
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

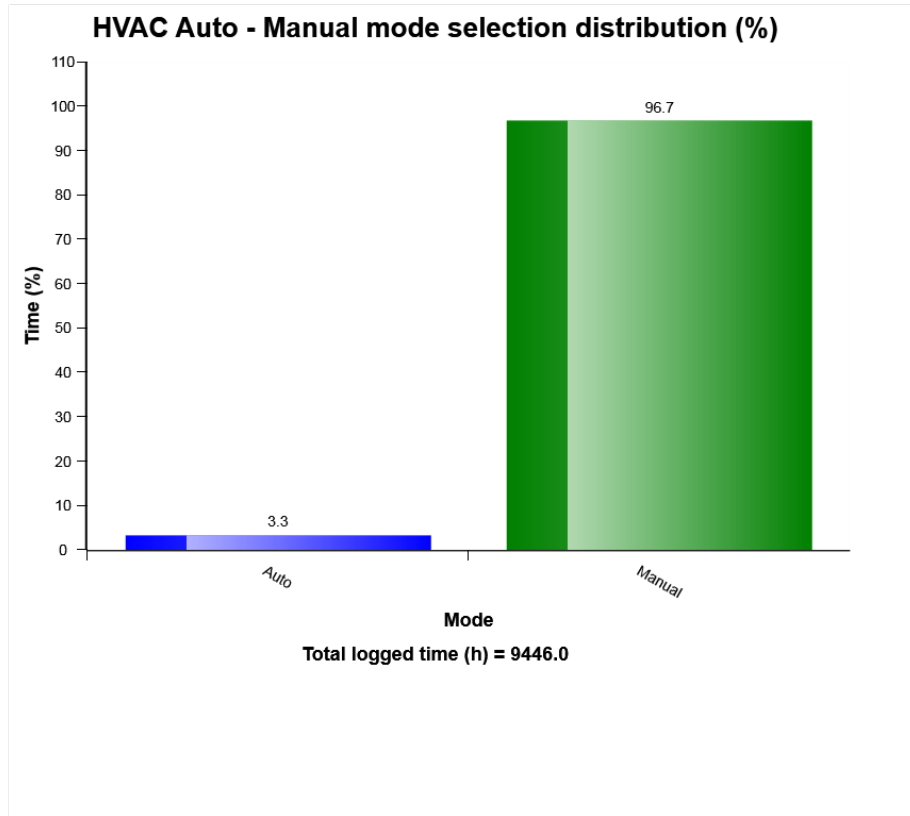
Yellow bar = High working temperature. It is normal to have some registrations in this region.

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
L110H	10290	9453.1	7/23/2018



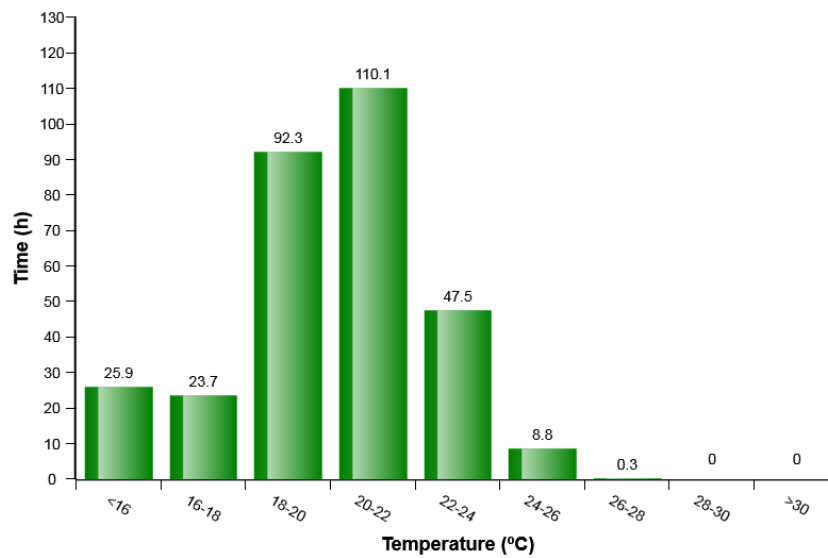
Definition:

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
L110H	10290	9453.1	7/23/2018

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

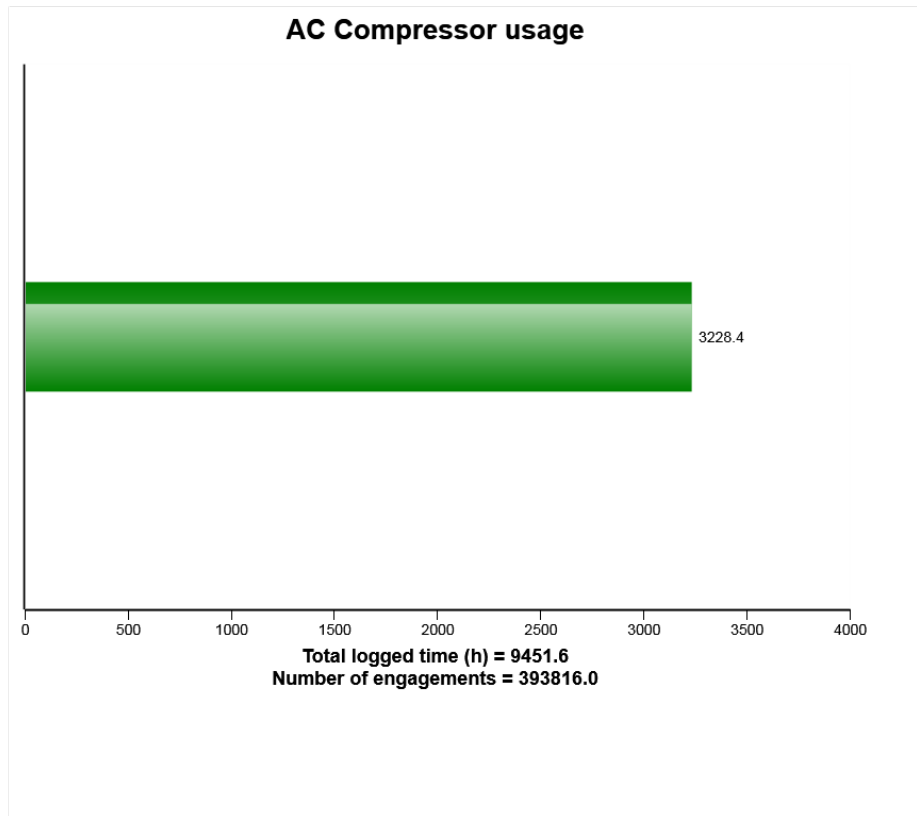


Definition:

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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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.

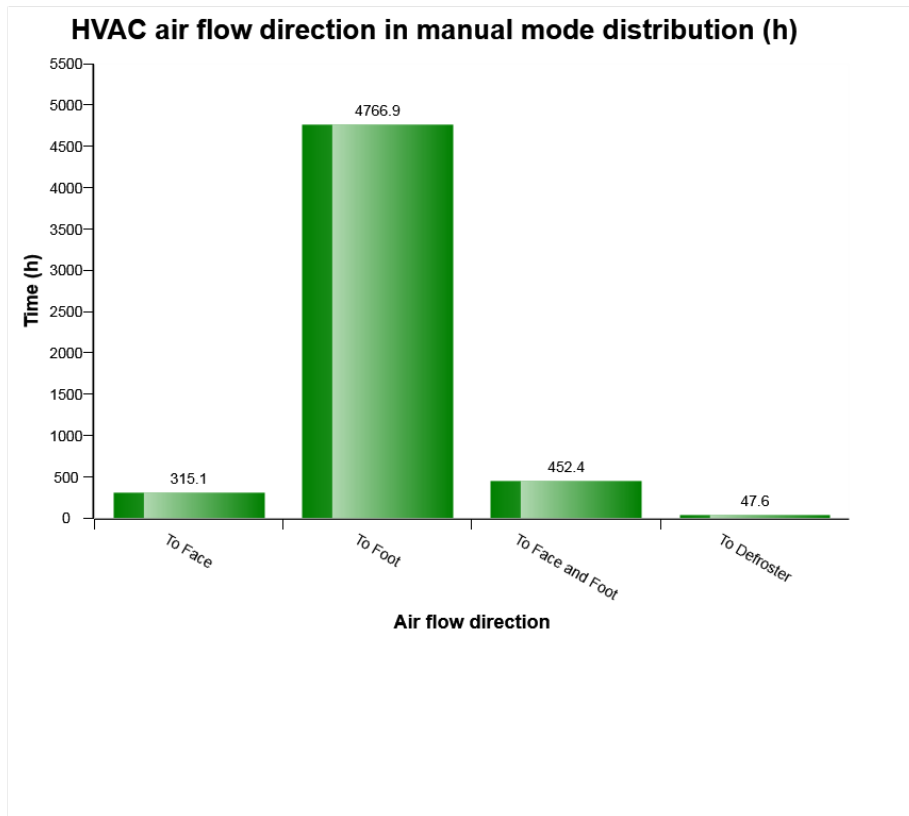


Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

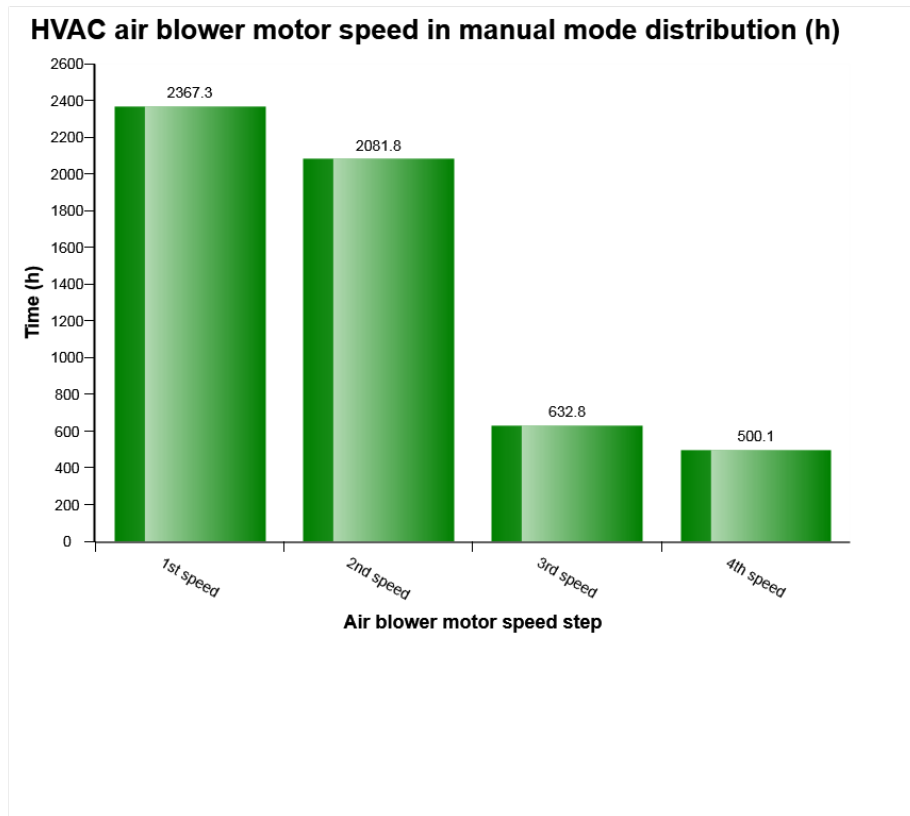


Definition:

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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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 :

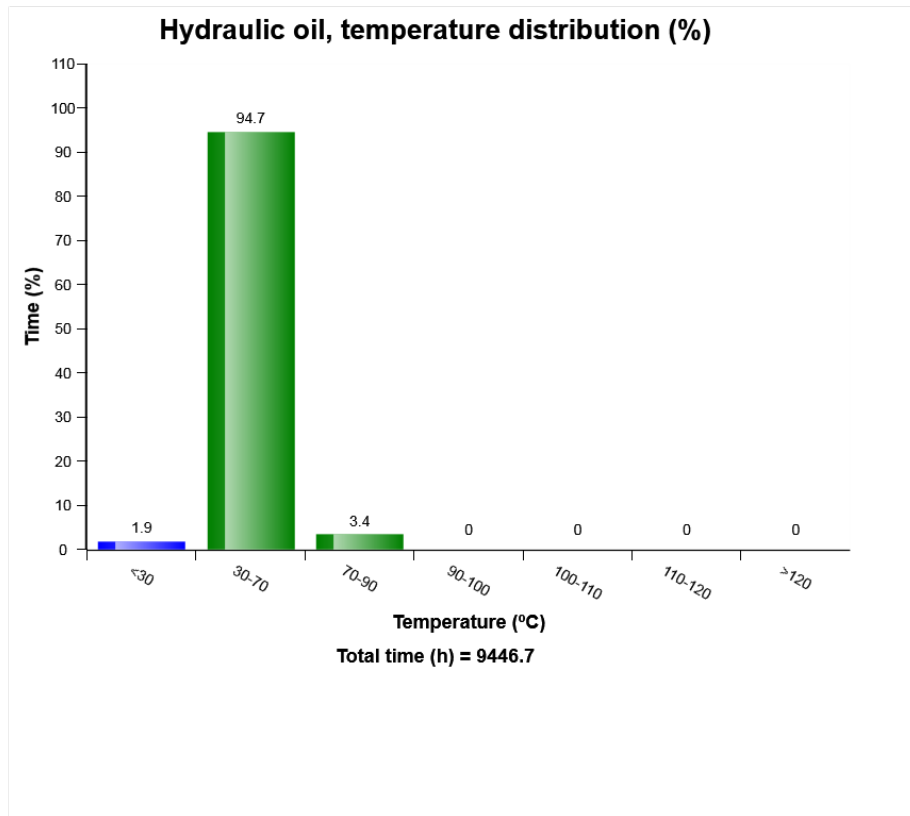
The extreme value column displays the most extreme value during the event.

Criteria :

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



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



Definition:

The graph describes hydraulic oil temperature distribution.

The sum of bars = Engine total running time.

Under the graph the total engine running time is displayed.

The value of each bar presented above the bars with one decimal.

Explanation:

Y-axis: Engine running time in percent of time.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

X-axis: Oil temperature distribution in °C.

Blue bar = Below 30°C, warming-up phase.

Green bar = From 30 ° C to 70°C, normal working temperature

Green bar = From 70 ° C to 90°C, normal working temperature

Green bar = From 90 ° C to 100°C, normal working temperature

Yellow bar = From 100 ° C to 110°C, high working temperature

Red bar = From 110°C to 120°, To high temperature

Red bar = Over 120°, Alarm

Temperature in this area is not normal.

Temperature over 120°C may cause severe damages on the hydraulic system.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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 hydraulic oil temperature , is active.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018

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.

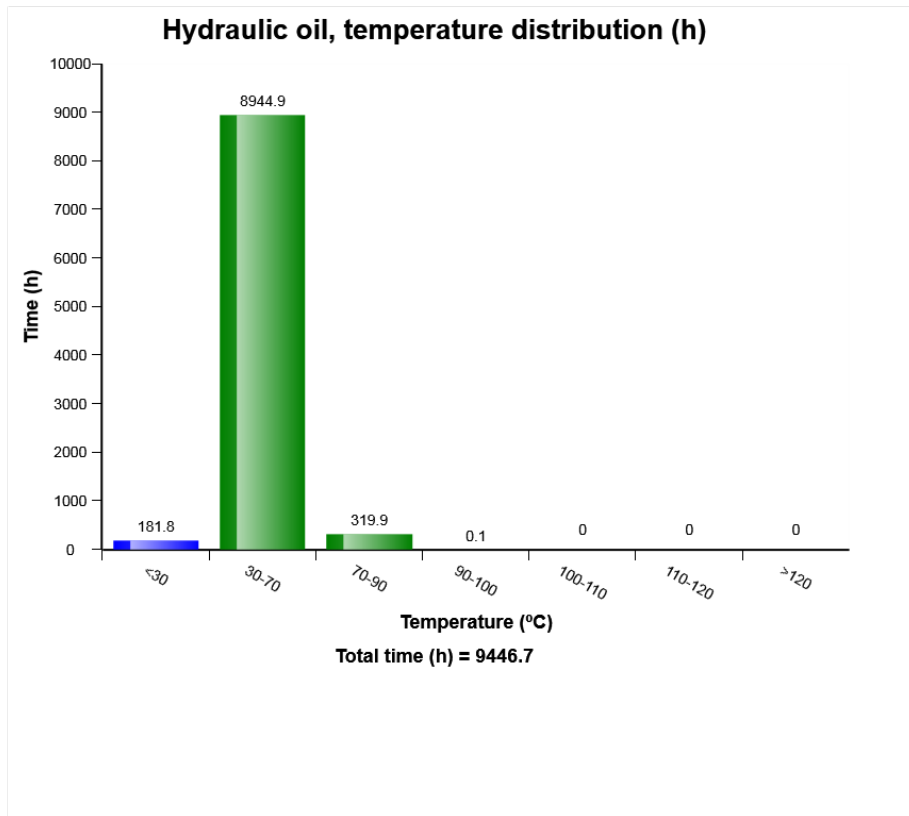
The duration is counted as long as the criteria is fulfilled.

Criteria :

The criteria to get a registration, is that the Alarm signal for low hydraulic oil level i s active and that the diesel engine is running.



Machine model	SerialNo	Operating Hours	Reading Date
L110H	10290	9453.1	7/23/2018



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
L110H	10290	9453.1	7/23/2018

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.

