



DTNA Solutions > Discussions and Feedback > Tech Talk
> Re: dpf ash volume vs ash filter full volume

Options



Bill_Ostrynski
Knuckle Buster

10-19-2018 10:16 AM

dpf ash volume vs ash filter full volume📎

Was wondering if someone could explain the difference between DPF ash volume vs Ash filter full volume in Diagnostic Link?

I'm dealing with one that reads 65.500 DPF ash volume & 0.83753 Ash filter full volume

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Electronics | Controls | Configuration | Communication | and Diagnostics

Fuel System | Throttle | Intake | and Exhaust

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37 KB



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Talbert_Simonia

King Pin

10-19-2018 10:22 AM

Is this in the template of ash reset.

Add tags



0 Kudos

Reply



Bill_Ostrynski

Knuckle Buster

10-19-2018 10:33 AM

It is under Actions, yes the template of ash reset

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0 Kudos

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Bill_Ostrynski
Knuckle Buster

10-19-2018 10:27 AM

It is under Actions, yes the template of ash reset

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0 Kudos

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Talbert_Simonia
King Pin

10-19-2018 10:32 AM

One is for the MCM. The other side is for the ACM. I think earlier units it may have been in the CPC. But one starts at 100.0. Then the other side starts at 0.00. One does a count down. The other counts up.

Add tags



0 Kudos

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Bill_Ostrynski
Knuckle Buster

10-19-2018 10:39 AM

Thank you I was told that but the math doesn't seem to work out ...my screen shot is .837 and 65.5

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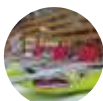
the numbers I thought should be (84&16) or (65.5&34.5)

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0 Kudos

Reply



 Scott_Trippel
Optimus Prime

10-19-2018 11:36 AM

I hate that screen too. Needs better clarification.

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0 Kudos

Reply



 Talbert_Simonia
King Pin

10-19-2018 11:50 AM

Numbers never add up.

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0 Kudos

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 Donnie_Lott
Knuckle Buster

03-13-2019 09:40 AM

I've been wondering this myself and did some asking around. Talked to one of my DSM's (which I am very thankful for) and he advised me that they use "Gallons of fuel used". It seems the magic number is 56k gallons used or burned turns the light on. So if you pull a DDEC report and check the life to date or calculated fuel economy via mileage you can get really close. We have so many used trucks coming thru here the salesman always like to know how much life is left in the DPF filters. This will definitely help with trying to give them a decent answer. Just thought I'd share.

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6 Kudos

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 Mic_Loschuk
Knuckle Buster

03-13-2019 09:59 AM

DPF ash volume = Ash accumulation of the DPF (filter life, 0 to 100)
Ash filter volume = Soot content of the DPF (when unit will be requiring a regen, 0 to 1)

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10 Kudos

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Kyle_Siebert
Optimus Prime

03-15-2019 02:22 AM

So then after a regen, ash filter full volume will be at 0?

That would make sense because after replacing the DPF and resetting these, they both start off at 0.

Im so glad this post was made.

Add tags



4 Kudos

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Metro_Roadservi
Wrench Turner

04-16-2019 04:57 AM

I Myself was puzzled with this screen. I did a little reading up on it, and came with the Conclusion (Mine only LOL) that the first # 65.5 is a Basic Timer for the Tech. The Filter is at 65.5 percent of its timing out life span. There for you can get a Idea of how much you have left before it brings up a code for Filter time out and Servicing. the Second Number 83.5 I count down from 100. So the Filter is 17% saturated with Soot/Ash. I use these numbers to kinda look at the Health and how effective the filter is working. And also how long still I can go before replacing them. ive gone up to 98% dpf ash volume on some trucks (they are in every week) and than changed. Second number never really seems to drop below 80% before this happens. Just my Take on it. Cheers.

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Scott_Trippel
Optimus Prime

04-16-2019 06:56 AM



Feedback

TECHCOM

I think everything said here is speculating and proper clarification is needed.

People seem to use ash and soot as the same thing. They are not, Ash is what is left when a regen is complete. Soot is what is converted. Soot is completely converted to water and nitrogen after a regeneration. Ash is what is left and the Ash comes from the engine oil. this is why Low Ash oil is required, it will extend DPF filter life.

So; the screen shot uses the word ash. "DPF ash volume" and "Ash filter volume". We replace the DPF filters because the Ash accumulation is too much. So if the "DPF ash volume" was the amount of "Soot" before a regen, why does it not use the word "Soot"?

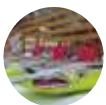
If one value was for soot, and was value was for ash, this would explain the difference in values and why they do not line up.

We replace the filters due to ash, which needs to be cleaned by Detroit reman centre.

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0 Kudos

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Scott_Trippel
Optimus Prime

04-17-2019 06:43 AM



Feedback

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ddc_sfari

Could someone PLEASE explain this panel?

We need some who knows the software and what it is calculating.

What does "Ash Volume" represent

What does "Filter Ash Volume" represent

and why do the numbers not look equal?

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4 Kudos

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Chris_Reed

Wrench Turner

04-18-2019 05:03 AM

I SECOND THAT ! WE SHOULD NOT NEED TO BEG FOR INFORMATION

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0 Kudos

Reply



Scott_Faris

New User

04-18-2019 06:28 AM

I don't have a lot of info on this, but I do know that they are separate accumulators with slightly differing measuring methods for redundancy in case one of the modules is ever replaced – CPC counts up in %, ACM counts down in a ratio calculation.

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For EPA10/GHG14/MY16 GHG17 – it's CPC and ACM.

On MY17+ software levels – it's MCM and ACM.

Note the following:

- Ash Cleaning Intervals are FIXED in the engine calibration & are dependent on EPA vintage, engine, application, & duty cycle.
- For EPA07 engines, it is a mileage based interval.
- For EPA10 & later engines, it is a more accurate fuel usage limit (gallons or kg's of fuel).
- In ALL cases, these limits result in code SPN: 3720 & FMI: 15 DPF – Ash Clean Request (results in Amber Warning Light).
- The major contributing factor to longer GHG17 cleaning intervals are increased ash capacity of the DPF along with improved fuel economy.
- GHG17 DPF's are **NOT** backwards compatible and CANNOT be used in older engines (GHG14 & earlier). Reference Technical Service letter 15TS8.
- Reference the DD Platform Operators Manual (DDC-SVC-MAN-0189) for complete information on DPF ash intervals.

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Scott_Trippel

Optimus Prime

04-18-2019 07:00 AM

So what number would best represent ash load? "Ash filter Volume" is at 0.83. I assume that is 83%

When customers come and ask for a DPF filter ash service, I always ask if they have a CEL on and if they have code 3720/15. Some customers think they are doing themselves a favor by replacing a DPF earlier. We even have been directed to change a DPF during an SCR replacement.

The panel is NOT clear

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1 Kudo

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+ Scott_Faris

New User

04-18-2019 09:10 AM

Ash Filter Full Volume counts down from 1.0. So if the ACM is reporting 0.83, it would be roughly 15-25% full on the CPC counter.

Under normal operation, there is no need to replace the DPF's until you get the 3720/15 code. This will maximize the life for the customer. When you do get the 3720/15 code, it's not like you have to immediately replace them that instant. But they should be replaced at the next convenient opportunity like within 1-2 weeks. Don't ignore the code for months.

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5 Kudos

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+ Kyle_Siebert

Optimus Prime

05-04-2020 05:22 PM

If CPC counts down and ACM counts up, then what does it mean on a EPA10 when The CPC2+ "DPF ash volume" reads 10.000 and ACM Ash Filter Full Volume" Is at 10.0

Sounds like it means the DPF is full and needs to be replaced but we are having a bit of a debate about it here.

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Scott_Trippel
Optimus Prime

05-05-2020 10:00 AM

There will be an active code 3720 15 for ash clean...if it needs to be serviced
I find reading the 2 ash counts confusing because I do not look at them often

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0 Kudos

Reply



Bill_Ostrynski
Knuckle Buster

04-08-2021 06:06 AM



DPF ASH VOLUME is % left for a regen **goes up in numerical value**
ASH FILTER FULL is % left for filter replacement **goes down in numerical value**

The pic is off a GHG17 training engine that has the accumulator reset the ACM states 0 so in this scenario of 10.0 technically it has approx 90% more to go before a regen is required. (DPF ASH VOLUME)

Ash filter full states 1.0 (100%) thats 100% clean because it counts down (ASH FILTER FULL @ 10.0) indicates 10% or less! life left until filter replacement is required.

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The decimal places always confuse me and always have to revisit my notes to align my brain

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 **IMG_8526.jpg** 
2850 KB



1 Kudo

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