



DPF CLEANING MADE EASY

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DPF (Diesel Particulate Filter) is a nightmare of many of the BS6 Diesel owners across all manufacturers. There are many theoretical work ups present among us. But many of us are unable to implement it in practical. Let us see how we can **CARE DPF**.

REASONS FOR FREQUENT CLOGGING OF DPF

- One of the main and most common reason is engine lugging. Many owners think that driving in low RPM will give good mileage. This is a myth. Timely gear shifting is one of the key for good mileage. So upshift only after getting sufficient momentum in current gear and downshift immediately when the power start to dip in current gear. Like this we can prevent lugging
- Heavy traffic drive
- Hill area drive
- During our study, we observed that using premium diesel causing frequent clogging (Because of additives). Fuel and Oil additives are the silent killers of BS6 Diesel engines.
- Short drives
- Clogged air filter – Change at every periodic service

In many of above situations, Catalytic Converter cannot achieve critical temperature to clean DPF effectively.

HOW WE CAN CLEAN DPF

As I mentioned above for cleaning the DPF , CAT should attain a critical temperature ie. $\sim 500^{\circ}\text{C}$. Cleaning process is known as Regeneration. That is 2 types

- **Passive Regeneration** :- It is not intentionally by user or car, happens during at periodic interval (As per our study , it is found that it will occurs under favorable conditions mentioned below
- **Active Regeneration** :- It is done by car PCM and we can induce it.

HOW TO IDENTIFY STARTING OF REGENERATION

- RPM will raise from 750 to ~ 1000
- You may feel slight vibration when the regeneration start
- You may feel bit sluggishness, lack of responsiveness and power loss during regeneration
- Instantaneous mileage will jump to over 1.5L/hr

WHAT WE NEED TO DO WHILE CAR IN REGENERATION PHASE

- After the start of regeneration, don't stop your car. If your car reach at your destination and regeneration going on, put your car in idle till the RPM come back to ~ 750 (Cleaning may not completely remove soot). If you purposefully doing the cleaning, drive calmly (1500 – 2000 RPM) till the idle RPM become ~ 750 , ie. the end of Regeneration phase
- Avoid exaggerated high RPM drive
- Better to use AC during this time.

HOW WE CAN INDUCE DPF CLEANING

Here 2 things will help you for inducing / identifying favorable condition for Regeneration. **1. ELM 327 OBD2 connector 2. FDPF – DPF Monitor for Ford app.** Connect your car to mobile using both utilities. Regeneration will start **ONLY** after **soot level reach 45 to 55%, DPF load reach 95 to 110% and CAT temperature reach ~500°C** . All 3 parameters should be attained to initiate Regeneration (Both Passive and Active). How can we do that?

1. Keep an eye on mobile app in **DPF SOOT %, DPF LOAD % and CAT Temp**
 2. Drive in 4th gear at 70 – 85km/hr constantly till we achieve above parameters
 3. Drive in 3rd gear at 55 – 75 km/hr constantly till we achieve above parameters
 4. In 3rd gear...Increase speed suddenly 50 to 90. Release accelerator. Allow the car to reduce speed by own. Once reaching 50.. again increase to 90... Like this do 5 - 7 times.
- Point (2) and (3) is necessary only if you performing cleaning after getting DPF warning. Another important fact is, **never use 5th gear while on Regeneration phase or during trying to induce it.**

After starting the regeneration, drive calmly between 1500 – 2000 RPM and the temperature of CAT should maintain over 500°C . If the temperature falls below, that will end the regeneration.

EXCEPTIONAL SITUATION

Sometimes if the DPF load is too low and still you get Drive to clean warning. That is because of LNT (Lean NOx Trap) filled up. Our app cannot monitor LNT. In this situation also, perform drive as mentioned above

OUR STUDY

We have spent ~ 2 months to study various procedures to clean DPF. In this **Mr. Ajith and Mr. Faizal** (Both from Freestyle Owners Club – Kerala) contributed heavily on each and everything. Both of their FS was a testing lab for the last 2 months. Mr. Ajith is the brain behind this idea and Mr. Faizal also done his best for this study. Another 2 persons we need to be thankful are

1. **Mr. Shabareenath** (ECOS Club - Kerala) – Shared us about FDPF app in DPF care
2. **Mr. Bobby** (Freestyle Owners Club – Kerala) – Shared his critical experience in daily drives

