

What are the most common reasons DOCs fail?

Your Partner in Exhaust and Emission



- **Face plugging:**

Face plugging occurs when there is visible soot build-up on the face of the DOC, potentially requiring cleaning or replacement.

Causes:

- **Light Duty Cycles and Low Exhaust Temperatures:** These conditions can prevent the DOC from reaching the necessary temperatures.
- **Upstream Engine Issues:** Including but not limited to leaks in the air intake system, exhaust leaks, and over-fueling by engine or aftertreatment injectors.



Here's an example of what a faceplugged DOC looks like.

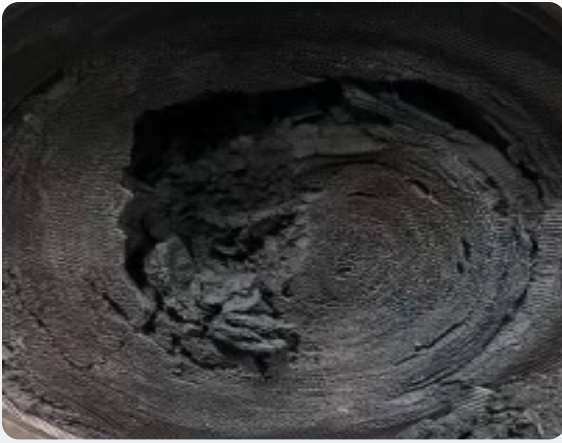
*Remember: DOCs are 'pass-through' devices, so if you were to shine a light on the DOC, you should be able to see the light shine all the way through.

- **Coolant contamination:**

The DOC could be damaged due to coolant entering the exhaust system.

Causes:

- **Leaking EGR Cooler:** This is the most common cause, where coolant leaks into the exhaust and reacts with the precious metals on the DOC substrate, shortening its lifespan.



- **Melting:**

The DOC substrate could melt under certain conditions.

Causes:

- **Excessive Fuel or Oil in Exhaust:** This can lead to extremely high temperatures, causing the substrate to melt.

- **Age:**

Over time, the catalytic materials in the DOC degrade and lose their effectiveness.

Causes:

- **Natural Degradation:** Continuous exposure to high temperatures and exhaust gases gradually reduces the catalyst's activity.

We recommend the following diagnostic procedures when treating DOCs:

- **Visual Inspection:** Inspect the DOC for visible signs of soot build-up (face plugging), physical damage, or melting.
- **Temperature Monitoring:** Use temperature sensors to monitor exhaust temperatures before and after the DOC to detect abnormal patterns. If the DPF outlet temp is more than 50 degrees higher than the DPF inlet temp, then the function of the DOC should be checked.
- **Codes:** Ensure you've troubleshooted all engine related codes prior to codes for the DOC. Most DOC failures are caused by upstream engine issues.
- **DPF Failures:** If a DPF has experienced a failure, ensure the DOC is still functional.

Aftertreatment systems are pretty complex and can be a bit confusing. Thankfully, Dinex is here for you *before, during, and after* your purchase. If you have any further technical support inquiries, please reach out to our technical support manager.



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