

40 C.F.R. § 1065.1135

Determination of key aftertreatment system components.

Most compression-ignition engine aftertreatment systems contain multiple catalysts, each with their own aging characteristics. However, in the accelerated aging protocol the system will be aged as a whole. Therefore, it is necessary to determine which catalyst components are the key components that will be used for deriving and scaling the aging cycle.

- (a) The primary aging catalyst in an aftertreatment system is the catalyst that is directly responsible for the majority of NO_x reduction, such as a urea SCR catalyst in a compression ignition aftertreatment system. This catalyst will be used as the basis for cycle generation. If a system contains multiple SCR catalysts that are separated by other heat generating components that would result in a different rate of heat exposure, then each SCR catalyst must be tracked separately. Use good engineering judgment to determine when there are multiple primary catalyst components. An example of this would be a light-off SCR catalyst placed upstream of a DOC which is used to generate heat for regeneration and is followed by a DPF and a second downstream SCR catalyst. In this case, both the light-off SCR and the downstream SCR would have very different thermal history, and therefore must be tracked separately. In applications where there is no SCR catalyst in the aftertreatment system, the primary catalyst is the first oxidizing catalyst component in the system which is typically a DOC or catalyzed DPF.

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