

The EPA Tier 3 program allows the interim (2019 is the last model year) use of two additional bins. These bins, Bin 85 (corresponding to the Tier 2 Bin 3) and Bin 110 (corresponding to the Tier 2 Bin 4), will need OBD thresholds defined. GM is recommending that the 1968.2 regulation treat Bin 85 as equivalent to ULEV 70. For the Bin 110, GM recommends the following:

	(NMOG + NO _x)	CO	PM THD
Monitors (ex. Catalyst)	1.85	1.5	17.5 g/mi
Catalyst Monitor	2.0	N/A	N/A

The (NMOG + NO_x) recommendation was calculated based on the Tier 2/LEV II OBD threshold in effect for Bin 4 ($2.5 \times \text{NO}_x$ and $1.5 \times \text{NMOG}$) weighted by the Bin 4 standard contribution to the interim Tier 3 Bin 110 ($\text{NMOG} = 70/110$ and $\text{NO}_x = 40/110$). For example for catalyst monitor: $(\text{NMOG} + \text{NO}_x) = 1.75 \times (70/110) + 2.5 \times (40/110) = 2.0$. I recommend the following draft regulatory language:

(e)(17.1.6) For the interim Tier 3 Bin 85 emissions standard, manufactures shall use the ULEV 70 malfunction criteria defined in table 1. For the interim Tier 3 Bin 110 emissions standard, manufactures shall use the following malfunction criteria:

	(NMOG + NO _x)	CO	PM THD
Monitors (ex. Catalyst)	1.85	1.5	17.5 g/mi
Catalyst Monitor	2.0	N/A	N/A

(f)(17.1.8) For the interim Tier 3 Bin 85 emissions standard, manufactures shall use the ULEV 70 malfunction criteria defined in table 1. For the interim Tier 3 Bin 110 emissions standard, manufactures shall use the following malfunction criteria:

	(NMOG + NO _x)	CO	PM THD
Monitors (ex. Catalyst)	1.85	1.5	17.5 g/mi
Catalyst Monitor	2.0	N/A	N/A

Note: EPA Tier 3 NPRM

Tier 3 Transitional Emissions Bins: During the development of the proposed rule and in their comments, manufacturers pointed out that they may continue to produce some vehicles as late as MY 2019 that could be certified to Tier 2 Bin 3 or Bin 4 standards. In order to provide manufacturers flexibility in meeting the fleet average standards and to further facilitate the transition, we will allow manufacturers to certify to the combined NMOG+NO_x levels of these Tier 2 bins through MY 2019. We are finalizing two transitional Tier 3 bins, Bin 110 and Bin 85, that have FTP NMOG+NO_x standards of 110 mg/mi and 85 mg/mi, respectively (i.e., the sum of the NMOG and NO_x values from the Tier 2 bins). The associated FTP standards for CO, PM, and HCHO corresponding to these bins are identical to those for vehicles certified to the Tier 3 Bin 125. Tier 3 SFTP standards will apply to these vehicles, and these vehicles will be included in the Tier 3 PM percent phase-in calculations.