

Center for Automotive Research

Breakfast Briefing

Automotive Fuels and Emissions: Policies, Compliance &
Potential Impact of Future Technologies

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Tier 3/LEV III Alignment – LD FTP

Tier 3 Program Element	Aligned with LEV III	Not Aligned but Equivalent	Not Aligned
30 mg/mi final fleet average (LDVs~LDT4s, MDPVs)	✓		
NMOG+NOx Standard	✓		
Declining fleet average curves (LEV III Proposal) • Tier 3 will adopt the LEV III curves at program start(s)	✓		
(6) Certification Bins	✓		
PM Standard = 3 mg/mi • 6 mg/mi in-use from 2017~2021 MY • Phase-in 2017~2021 MY • Certification: 25% of durability groups per year • IUVP: 50% of high mileage vehicles	✓		1 mg/mi standard
150,00 Mile Useful Life • Required for vehicles >3,750 lbs LVW and >6,000 lbs GVW • Optional for vehicles <3,750 lbs LVW however, held to a lower standard		✓	
Early credits: <6000 lbs GVWR – 2015/16 MY's; >6000 lbs GWR – 2016/17		✓	
Start: 2017 MY for vehicle <6000 lbs GVW, 2018 MY for vehicles >6000 lbs GVW			○
Phase-in: All vehicles certified to Bin 70 or cleaner must meet useful life requirements and be certified on Tier 3 fuel	✓		
Final: 2025 MY	✓		

Tier 3/LEV III Alignment – LD SFTP

Tier 3 Program Element	Aligned with LEV III	Not Aligned but Equivalent	Not Aligned
50 mg/mi final fleet average	✓		
NMOG+NOx Standard	✓		
Family Emission Limits (FEL) <ul style="list-style-type: none"> • Up to 180 mg/mi, in even 10 mg/mi increments 	✓		
Declining fleet average curve (LEV III Proposal) <ul style="list-style-type: none"> • Tier 3 will adopt the LEV III curve at program start(s) 	✓		
Composite SFTP standard not linked to FTP bin <ul style="list-style-type: none"> • LEV III Option #2 	✓		
US06 PM Standard = 10/20 mg/mi for LDV~LDT2s and LDT3's and 4's <ul style="list-style-type: none"> • 15/25 mg/mi in-use from 2017~2021 MY • Phase-in 2017 MY ~2021 MY • Certification: 25% of durability groups per year • IUVP: 50% of high mileage vehicles 	✓		
Start: 2017 MY for vehicle <6000 lbs GVW, 2018 MY for vehicles >6000 lbs GVW			○
Final: 2025 MY	✓		

Tier 3/LEV III Alignment – MDV's

Tier 3 Program Element	Aligned with LEV III	Not Aligned but Equivalent	Not Aligned
Declining fleet averages for 2Bs and 3s	✓		
NMOG+NOx Standard	✓		
Declining fleet average curves (LEV III Proposal) • Tier 3 will adopt the LEV III curves at program start	✓		
FTP PM • 8 mg/mi – class 2B, 10 mg/mi – class 3	✓		
SFTP Composite PM Standard • 7 mg/mi for low HP/wt 2Bs and all 3s • 10 mg/mi for 2Bs >0.024 hp/lb	✓		
150,000 mile Useful Life	✓		
New SFTP with cycle mix to reflect in-use driving and ALVW	✓		
Start: 2018 MY Phase-in: 20/40/70/100%			○
Final: 2025 MY	✓		

Tier 3/LEV III Alignment – Evap

Tier 3 Program Element	Aligned with LEV III	Not Aligned but Equivalent	Not Aligned																																										
<p>Adopt LEV III “zero evap” standards</p> <table border="1"> <thead> <tr> <th>Vehicle Category</th> <th>Highest Diurnal + Hot-soak of 2&3-day(g/test)</th> <th>FEL Cap (g/test)</th> <th>High Altitude at 7.8 RVP (g/test)²</th> <th>Running Loss (g/mi)</th> <th>Canister Bleed Emissions Test (g/test)²</th> </tr> </thead> <tbody> <tr> <td>LDV</td> <td>0.300</td> <td>0.500</td> <td>0.65</td> <td>0.05</td> <td>0.020</td> </tr> <tr> <td>LDT1</td> <td></td> <td>0.650</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LDT2</td> <td>0.400</td> <td>0.650</td> <td>0.85</td> <td>0.05</td> <td>0.020</td> </tr> <tr> <td>LDT3, LDT4, MDPV</td> <td>0.500</td> <td>0.900</td> <td>1.15</td> <td>0.05</td> <td>0.020</td> </tr> <tr> <td></td> <td></td> <td>0.900</td> <td>1.25</td> <td></td> <td></td> </tr> <tr> <td>Class 2b/3 HDGV</td> <td>0.600</td> <td>1.4</td> <td>1.75</td> <td>0.05</td> <td>0.030</td> </tr> </tbody> </table>	Vehicle Category	Highest Diurnal + Hot-soak of 2&3-day(g/test)	FEL Cap (g/test)	High Altitude at 7.8 RVP (g/test) ²	Running Loss (g/mi)	Canister Bleed Emissions Test (g/test) ²	LDV	0.300	0.500	0.65	0.05	0.020	LDT1		0.650				LDT2	0.400	0.650	0.85	0.05	0.020	LDT3, LDT4, MDPV	0.500	0.900	1.15	0.05	0.020			0.900	1.25			Class 2b/3 HDGV	0.600	1.4	1.75	0.05	0.030	✓		
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Allowances earned for Early Tier 3, PZEV zero evap, or CARB LEV III		✓																																											
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Leak test	✓																																												
Enhanced OBD	✓																																												
Start: 2017 MY for vehicle <6000 lbs GVW, 2018 MY for vehicles >6000 lbs GVW (40/60/80/100%)		✓																																											
Final: 100% in 2022 MY	✓																																												

Tier 3/LEV III Alignment – Other Elements

Tier 3 Program Element	Aligned with LEV III	Not Aligned but Equivalent	Not Aligned
Adopt 150,000 mile warranty credit	✓		
Adopt DOR credit	✓		
CARB will allow certification on Tier 3 fuel in 2015 and 2016 MY	✓		
Measurement of PM per 1065/1066	✓		
Altitude relief <ul style="list-style-type: none"> • Next highest bin for Bins 20 ~ 50 • Bins 70 and 125: 35 mg/mi • Bin 160: No relief 	Alignment not required		