

Global Emissions Regulatory Roadmap



LV - Light Vehicles CTrk - Commercial Trucks Off-Hwy - Off-Highway Vehicles * Phased in ** Estimated date *** Possible harmonization with Stage 5

	2011	2012	2013	2014	2015	2016	2017	2018	2019/2020
U.S. & Canada	US Off-Hwy Tier 4*	CA CTrk Retrofit*	RICE Stationary US revised NAAQS	US Off-Hwy Tier 4f* Marine Tier 4* CA Off-Hwy Large Fleets* US Utility MACT	CA LEV III* Locomotive Tier 4	NSPS Stationary NOx* CA Off-Hwy Medium Fleets*	US Fed Tier 3 LV*	US Fed Tier 3 Light Truck*	CA CTrk NOx** EPA Tier 5 Off-Hwy*** CA Off-Hwy Small Fleets*
Europe	EU Off-Hwy Stage 3B* EU CO ₂ / GHG 120g PM # LV		EU Sound regulation Euro-6 CTrk	Euro-6b LV EU Off-Hwy Stage 4*			Euro-6c LV RDE LV**,**		EU LV WLTP*,** EU Off-Hwy Stage 5**
China		Major Cities NS 5 LV*	NS IV CTrk*	Off-Hwy Stage 3A*		China 5 LV (Eastern Provinces)** Beijing V CTrk	Beijing 6 LV** NS V CTrk*,** Beijing VI CTrk** Off-Hwy Stage 3B**	China NS 5 LV	China NS 6 LV*,** NS VI CTrk*,** Off-Hwy Stage 4*,** Locomotive**
Japan	NOx reductions LV		JP-13 CTrk		Off-Hwy Tier 4B	JP-16 CTrk*			
South America		Brazil: Euro-5 CTrk	Chile: Euro-5 LV		Brazil: Off-Hwy Stage 3A (construction)		Brazil: Off-Hwy Stage 3A (farming)	Brazil: Euro-6 CTrk**	Brazil: Off-Hwy Stage 3B**
Russia			Euro-4 LV / CTrk		Euro-5 LV / CTrk				
India	BS-4 LV / CTrk (13 Cities) BS-IIIa Off-Hwy				BS-4 LV / CTrk (50 Cities)	Off-Hwy BS- IIIb**	BS-4 LV / CTrk		BS-5 LV/CTrk** Off-Hwy BS-IV*
Global Treaty						Marine Annex VI Tier III NOx		Marine Annex VI Tier III SOx	

Unprecedented Speed of Change