

US EPA	EUROPEAN UNION	JAPAN
40 CFR PART 86	2001/27/EC	
<p>Design Screening Thresholds</p> <p>For any intake manifold temperature strategy that advances injection timing at intake manifold temperatures above 60 degrees F, the manufacturer must demonstrate that the strategy is the minimum strategy necessary to protect against engine damage, white smoke, or misfire.</p> <p>Engine temperature is generally measured either in the engine coolant system or the engine oil system. AECDs that reduce effectiveness of the emission control system in response to engine temperature are generally acceptable provided the adverse impact occurs outside of normal, stabilized operating temperature. Normal stabilized engine operating temperature shall be considered to be within 5 percent of thermostatically controlled engine operating temperature (measured in degrees Fahrenheit).</p> <p>For any altitude strategy that advances timing at altitudes below 5,500 feet (or the equivalent pressure) or which maintains timing advance when descending through 5,500 feet below 5,300 feet, the manufacturer must demonstrate that the strategy is the minimum strategy necessary to protect against engine damage, white smoke, or misfire.</p>	<p>Defined Operating Conditions</p> <ul style="list-style-type: none"> - an altitude not exceeding 1,000 meters (or equivalent atmospheric pressure of 90 kPa) - an ambient temperature within the range 283° to 303° K (10° to 30° C) - engine coolant temperature within the range 343 to 368 K (70 to 95 C) 	<p>Non-operating Region</p> <p>Temperature</p> <ul style="list-style-type: none"> - for cold engine: 70° C maximum - for hot engine: 105° C minimum <p>Oil temperature</p> <ul style="list-style-type: none"> - for cold engine: 60° C maximum - for hot engine: 120° C minimum

