Cool Car Standard
Ford Comments

Ford supports ARB's goal of achieving cooler interior cabin temperatures in vehicles parked in the sun. We do request, however, three changes to the proposed standard.

1) Performance Based Compliance Alternative

- We request that an additional performance based compliance alternative be added in order to encourage innovation, competition, and cost efficiency. Improving cost efficiency is important as Ford calculates lower benefits for the regulation due to implementation of variable displacement compressors, and higher costs based on our present production cost of reflective windshields in Europe.
- Performance of alternative cooling technologies could be determined by:
  - Heating two vehicle configurations and recording the interior temperature
    - one with standard glazing
    - one with glazing as specified by the regulation
  - Performing the same procedure on the same vehicle model with alternate cooling technologies.
  - If the alternate technologies result in the same or lower interior temperature as the vehicle with compliant glazing, it would be submitted to the Executive Officer for approval.
- The alternate cooling technologies must be independent of driver action (operate automatically).
- We have made this request of staff. They are concerned about the lack of an agreed to test procedure, as well as workload associated with evaluating alternatives.

2) Reflective Windshield Phase-In

- We request different phase-in timing to help accommodate deep bend windshields which have more complex configurations.
- Roughly half of Ford's North American windshields will be deep bend in the 2012 MY.
- There are two methods of achieving reflective windshields:
  1) Film on PET, which is more compatible with Ford processes and has shorter lead time, but has feasibility issues with deep bend windshields (wrinkling and distortion).
  2) Coating on glass which has a longer lead time and which few North American suppliers have facilities to support, but is preferable for deep bend windshields.
- To better accommodate deep bend windshields we request the following phase in:

Windshield Requirement	Proposed Regulation	Ford Request
2012 MY	75% volume, Level 1	50% volume, Level 1
2013 MY	100% volume, Level 1	75% volume, Level 1
2014 MY	100% volume, Level 2	100% volume, Level 2

- Allowing for this different phase in would give us flexibility for more efficient use of resources within the context of our upcoming products and require fewer windshield changes.
- We have made this request of staff. They believe the present phase-in is sufficient.

3) Addition of a Semi-Annual Technology Review

- Based on evaluation of samples from suppliers, Ford believes the Level 2 windshield requirement (< 40% Tts) is technology forcing.
- Presently, two suppliers are close to meeting the level 2 standard. A technology review would provide additional time (if required) for additional suppliers to meet this requirement and introduce the technology without compromising quality.
- Adoption of polycarbonate windshields, planned for the future, would result in a higher CO_2 savings (due to weight savings) but would require a lower standard.
- Electronic device interference is an issue with reflective coatings and may require improved antennas or repeaters, thus additional design time and cost.
- This request has been made to Staff and they believe 2014 MY is sufficient time to introduce Level 2 standards.

Testing Sites