Czinger Vehicles Part 555 Petition for Polycarbonate Glazing Materials

Supplementary Information 2

Czinger Vehicles is a newly established American low volume OEM producing innovative, high performance, vehicles.

Czinger Vehicle's first vehicle, the 21C, is a low volume hypercar. It is the flagship vehicle that introduces the brand, but the majority of Czinger's future business is higher volume vehicles such as the Czinger Hyper GT which was revealed at Monterey Car Week in August 2022. This subsequent model uses a more conventional windshield shape for which the production material will be conventional automotive glass.

Simply said, the requested exemption is a critical means for Czinger to "bridge the gap" until the next Czinger model arrives, and that next model will be fully FMVSS compliant. Furthermore, NHTSA has historically granted exemptions similar to this case. Please see the example below:

Federal Register :: Automobili Lamborghini SpA; Bugatti Automobiles S.A.S. and Bugatti Engineering GmbH; Group Lotus Plc; Morgan Motor Company Limited; Maserati; Grant of Applications for a Temporary Exemption From Advanced Air Bag Requirements of FMVSS No. 208

The requested exemption will apply only to the 21C, the production for which will span from 2023 to 2026 for a total production volume not to exceed 110 units with a significant percentage being sold internationally. The Hyper GT will follow the 21C with a conventional windshield material. Czinger Vehicles will be producing models fully compliant to FMVSS 205, and not requiring the exemption, by model year 2027.

If granted, this exemption will allow Czinger Vehicles to secure revenue essential to its continuation and allow it to form a bridge to be in a position to produce vehicles where such exemptions are not required. Without this exemption Czinger will not be able to enter production with the 21C and the company will suffer financial failure.

As the first in a series of planned models, the 21C has a unique, inline, cockpit seating arrangement. This unique design feature has proven to be extremely popular with customers who have placed orders based on 21C's unique aerodynamic appearance and seating arrangement akin to a jet plane.

The unique appearance of the 21C is derived from its large windshield that curves on two axes which has proven to be infeasible to manufacture from glass. Czinger vehicles underwent a comprehensive assessment, at a cost of $80,000, of different physical manufacturing techniques with its windshield supplier, Isoclima, in a concerted effort to achieve a solution to manufacture the windshield in glass. This effort proved unsuccessful, and it was concluded that this geometry could not be manufactured in glass.

The 21C uses a polycarbonate windshield as it is the only material capable of producing the required, unique, bi-directional curvature. It is for this reason Czinger vehicles seeks an exemption to use a polycarbonate windshield material based on the economic implications of re-design which could cause the total loss of all orders placed to date – a loss totaling over *[confidential information redacted]* in sales alone.

49 CFR 555.6(a)(1) states that an applicant shall provide:
"Engineering and financial information demonstrating in detail how compliance or failure to obtain an exemption would cause substantial economic hardship, including;

i) A list or description of each item of motor vehicle equipment that would have to be modified in order to achieve compliance.

In Czinger's case, it will be shown that failure to obtain an exemption would cause substantial economic hardship including:

The failure to obtain an exemption and the inability of the company to sell the 21C in the US would mean a cost (lost sales revenue) amounting to over *[confidential information redacted]*. Given the development costs of *[confidential information redacted]* that Czinger has incurred to date this loss in sales would result in financial failure of the business.

Czinger has demonstrated that full compliance with FMVSS 205 cannot be achieved as a technical matter because there is no current way to achieve compliance with Item 1 test 18 under the ANSI standard incorporated by reference in FMVSS 205. It is not a matter of cost but rather technical feasibility. A windshield meeting the design specifications of the vehicle cannot be constructed in FMVSS 205 compliant glass because the technology is not available to do so. Furthermore, there is no technology available to construct a windshield from polycarbonate that meets Item 1 test 18.

Since no feasible alternative to a polycarbonate windshield currently exists, a denial of the petition would mean an inability to sell the 21C in the US, and an exemption for less than three years would cause a premature halt to US sales. (Czinger notes that the 21C windshield does fully comply with EU requirements).

If the exemption were granted for only one year, then US production would be reduced by 82%, causing lost revenue in the amount of *[confidential information redacted]*.

Similarly if the exemption were granted only for two years then US production would be reduced by 18%, causing lost revenue in the amount of *[confidential information redacted]*.

In contrast, at the end of a three-year exemption, there would be no loss of revenue since US production will have been finished in it its entirety.

Furthermore 49 CFR 555.6(1)(ii) requires:

(ii) The itemized estimated cost to modify each such item of motor vehicle equipment if compliance were to be achieved.

But here compliance **cannot be achieved** and there is no way to provide estimated cost to modify the windshield to achieve compliance.

As regards 49 CFR 555.6(1)(iii), this section requires:
(iii) The estimated price increase per vehicle to balance the total costs incurred pursuant to paragraph (a)(1)(ii) of this section and a statement of the anticipated effect of each such price increase.

Czinger can address, as follows, the issue of a price increase per vehicle to balance the total costs incurred if an exemption were denied or granted for less than three years as well as the anticipated effect of each such price increase.

If an exemption were denied, to maintain the sales revenue based on the 21C sales volume worldwide (the revenue needed under Czinger's business plan), the price of *non-*US vehicles would have to increase to from $2M to $6.4M. Similarly, if an exemption were only granted for one year, the unit price of US cars built during that year as well as the unit price of all non-US cars would have to increase to $4.57M. If an exemption were only granted for two years, the unit price of US cars built during those two years as well as the unit price of all non-US cars would have to increase to $2.29M.

These price increases would cause the 21C not to sell as the price point would be outside of the competitive market range.

In contrast, with an exemption of 3 years; the current price of $2M (which is viable under Czinger's business plan) can be maintained.

Additionally, section 555.6(a)(2) requires a description of efforts to comply with the FMVSS 205 test standards, including:

> (iv) A description of the steps to be taken, while the exemption is in effect, and the estimated date by which full compliance will be achieved either by design changes or termination of production of nonconforming vehicles.

Czinger has indicated that because there is presently no manufacturing solution to create the 21C windshield in glass (and meet the requirements in FMVSS 205) or to build the 21C windshield in polycarbonate that meets Item 1 test 18, it is intended that the production of the 21C will conclude at the end of the requested three-year exemption.

Czinger has also indicated to NHTSA the steps that Czinger will take while the exemption is in effect, including the inspection of vehicles for abrasion and the replacement of windshields in event of unacceptable abrasion.

In conclusion, the requested exemption fits clearly within the objective of substantial economic hardship exemptions – to allow a small OEM experiencing financial challenges to proceed forward with fully-compliant vehicles by allowing exempted vehicles to be sold for a brief period of time provided that, as in this case, the OEM demonstrates that it has tried in good faith to comply and that an exemption is in the public interest and consistent with the objectives of the SAFETY ACT.