



Lexan Windows

CAGC INFORMATION ALERT

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The use of Lexan in the geophysical seismic industry has grown in the last five years as machinery being used in our industry has gone to 'full cab' configurations. This has been done to meet safety requirements, increase operator outward visibility and at the same time, increase operator comfort (dust free, heated and air conditioned cabs).

Lexan is used mainly in one application (windows) and in many industries outside of our own. The issuance of this bulletin is in response to documented cases outside of the geophysical industry where a Lexan window has been broken during the course of a work day.

According to documentation, Lexan is reputed to have up to 250 times the impact strength of an equivalent thickness of ordinary glass and 30 times that of plexiglas. While these numbers are true in cases where the sheet of Lexan is new and the temperatures are moderate, this is not guaranteed when the aforementioned conditions change. The following recommendations were recommended by a heavy equipment manufacturer to its customers in response to a series of incidents. A Lexan window should be changed under the following conditions:

- If a window is four or more years old (regardless of how it may look);
- If the window has become yellowed or hazed;
- If it has scratches on either side that can be felt with a fingernail;
- If there are small cracks coming from the mounting holes;
- If there are small cracks in the surface area;
- If it has come into contact with any fluids that have caused cloudiness.

In addition, while a certain thickness of Lexan will stop a bullet of a specific caliber, it will not prevent a tree from coming into a cab, if it is of sufficient size. In this case, metal screens would be needed in conjunction with the Lexan window(s). Also, when it is extremely cold i.e. -20C, the materials resistance to shattering is lessened as the material becomes 'brittle' as the temperature lowers.

It is asked that this information be discussed at any future applicable safety meetings and that all units equipped with Lexan windows are inspected with the above criteria in mind.
