

### History

Severe passenger window crazing can push maintenance costs higher and higher and customer satisfaction lower and lower. GKN Aerospace Transparency Systems has been at the forefront in developing solutions to combat the ill effects of premature window crazing. As a result, the GKN ATS CRYSTALVUE™ coated craze resistant passenger window has become the passenger window product of choice by aircraft manufacturers and airlines worldwide.

### Solution

Building on the successful performance of CRYSTALVUE, GKN ATS has now introduced a new enhanced version designated as *CRYSTALVUE II*. *CRYSTALVUE II* is the result of listening to the customer. Since the commercial introduction of *CRYSTALVUE* in 1993, GKN ATS has spent a great deal of time working with airline operators, listening and learning, to make a great product better. As a result, GKN ATS has added, among other improvements, our abrasion resistant coating to the inner surface of the *CRYSTALVUE* pane. *CRYSTALVUE II* offers further maintenance cost savings to the airlines and greater passenger satisfaction.

### Improvements

- *Greater resistance to handling damage during installation - reducing the incidents of scrap, rework and redundant labor often experienced during aircraft maintenance*
- *Greater light transmission*
- *Improved water repellency and stain resistance to resist the moisture effects of condensation between the panes*
- *Incremental improvement in optical clarity to enhance passenger satisfaction*

### Launch Customers

CRYSTALVUE II has been standard equipment on all new Boeing production aircraft as of September 1996. Today, more than 400,000 CRYSTAL VUE II™ windows are inservice worldwide. CRYSTALVUE II is now the standard product for new aircraft production and spares requirements.

# WARRANTY

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## GENERAL WARRANTY

Seller warrants that at the time of delivery the articles furnished hereunder will be free from defects in material and workmanship and will conform to the drawings and specifications. Except for latent defects, all articles furnished hereunder shall be deemed to be finally accepted by Buyer unless Seller receives notice of rejection within a reasonable time but no later than 90 days after the receipt of articles by Buyer. As to latent defects, Buyer may reject articles within one year after date of shipment. If Seller elects to repair or replace a defective or non-conforming article, Seller's warranty for said article shall be limited to the unused portion of the original warranty. ***THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.***

## WARRANTY PROVISION

There shall be no Continuing Warranty by Seller for defects attributable in whole or in part to normal wear and tear or to factors beyond Seller's control, including but not limited to Buyer's design, failure of Buyer or its customers to properly preserve, store, install, operate, or maintain parts made by Seller or the end item in which parts are installed. Seller also denies liability for any failure or deterioration of parts attributable to extended storage under conditions of excessive temperature or humidity, and for any malfunction or design deficiency occurring in other systems or installations that would in turn affect the performance of the part. Seller further denies liability for performance of the parts under the Continuing Warranty provision where abnormal environmental and/or operating condition are encountered by the aircraft (or Buyer's end item).

## SELLER'S LIABILITY

Seller's liability for defective or nonconforming articles is limited to the repair or replacement with surface freight shipping charges in the Continental United States to be paid by Seller, or refund of the purchase price as Seller may elect. Defective or nonconforming articles shall not be returned to Seller without Seller's prior written permission. Under no circumstances shall Seller be obligated for consequential, incidental or other damages, losses or expenses in connection with or by reason of any breach. Seller's liability hereunder shall in any event be limited to the purchase price of the articles. The remedies expressed are exclusive. Claims for defective or nonconforming articles shall be in writing and submitted within the period specified in the General Warranty.

## EXTENDED WARRANTY

CrystalVue II passenger windows will be warranted against objectionable crazing and/or coating cracks for five years from date of shipment, or 54 months from date of installation, or 20,000 flight hours, whichever occurs first. Legitimate claims will be honored with a replacement part furnished at no charge. The replacement part will be warranted for the same defect for the balance of the original warranty.

Objectionable crazing and coating cracks is defined as follows: crazing and/or coating cracks in a passenger window that impairs vision to the extent that it requires removal by the aircraft operator. The condition must be evident in normal daylight conditions without use of magnification. Normal daylight conditions may be simulated with an artificial light source. As a guideline, Figure 8 in the Swedlow Technical Report TR-89-1 (350S window) would be a legitimate warranty claim. GKN ATS reserves the right to inspect any rejected windows for concurrence of the validity of each claim.

The crazing/cracking warranty is excluded in cases where the inducement is traceable to other causes, for example: exposure to paint, organic solvents or corrosive chemicals; scratches or gouges which have induced crazing; and optical refinishing (sanding and/or polishing).

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further information.

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