

## SAFETY NOTICE, INTEGRAL copy brake discs

To whom it may concern,

For some time now, "one-piece" copy brake discs with the SAF-HOLLAND reference numbers

04 079 0013 03 (22.5")

04 079 0010 04 (19.5")

have been offered for the aftermarket which, in addition, from a geometric perspective, can be installed in exchange for our own original INTEGRAL brake discs on SAF axles. **These copied products, however, differ greatly from our original brake discs.** The most significant technical difference between these discs as compared to our original discs is the one-piece manufacturing and the associated comprehensive use of grey cast iron for the entire brake disc. Our original brake discs, on the other hand, consist of an adapter ring made of high-strength spheroidal graphite iron as well as a grey iron friction ring which, in a separate process, is cast onto this adapter.

As our customer, you can only recognize this technical difference between the original brake discs and the one-piece copy brake discs currently available on the market through careful examination. A further relevant aspect is the mounting of the brake disc on the wheel hub, which is done with heat-resistant screws developed especially for this application. On our original brake discs, the through-holes for the screws are located in the area of the high-strength adapter, whereas on the one-piece copy brake discs they are located in the grey iron which is much too soft for this purpose. **This difference in materials as well as the one-piece manufacture of the disc brakes can lead to tension cracks in the area of the through-holes.**

In a standardized performance test in accordance with GLOBAL SPEC VC (planned ISO-Standard 15484) and disc brake comparison test in accordance with ISO/DIS 26865 (point 6.4) by a certified testing company (HONEYWELL Bremsbelag GmbH) **tension cracks did in fact occur in the area of the through-holes (mounting) on these one-piece INTEGRAL copy disc brakes**, which can lead to a complete component failure and thus also to brake failure (see attached images).

Among other things, we found another disadvantage of the INTEGRAL copied brake discs resulting from the break out or continuing torque, determined in the scope of the test of the Original-SAF double hexagon head screws that were used: **in the test with the one-piece copied brake discs, the double hexagon head screws became so loose after the performance test, that they could be removed manually, without the help of any additional tools.** Due to the not hardened grey cast iron material used for the adapter in the one-piece copied brake discs, a partially very significant setting behaviour in the screw connection was observed which in practice could lead to a loss of tension as well as a loose fitting and therefore to a complete loss of the screw.

This, according to current findings, is the basis for a **safety risk**, because a sufficient brake performance can no longer be guaranteed. In addition, blocking brakes can, for example, have a negative impact on vehicle stability and brake pieces which break and fall off can represent a danger to others. Because, according to the information we currently have available, a danger from the one-piece INTEGRAL copied brake discs cannot be completely ruled out, we advise that the utmost caution be used in this regard.

**We hereby explicitly state that at no time have we authorized the use of the copied products and we will not authorize their use in the future. Should they nonetheless be used with our axles, we must reject any liability for any damage that may arise as a result.**

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Please inform any of your customers and/or purchasers who may be affected.  
If you have any questions or if you require additional information, please get in touch with us at  
0049/(0)6095/301-301.

Best regards,



Rudi Ludwig  
Chief Executive Officer

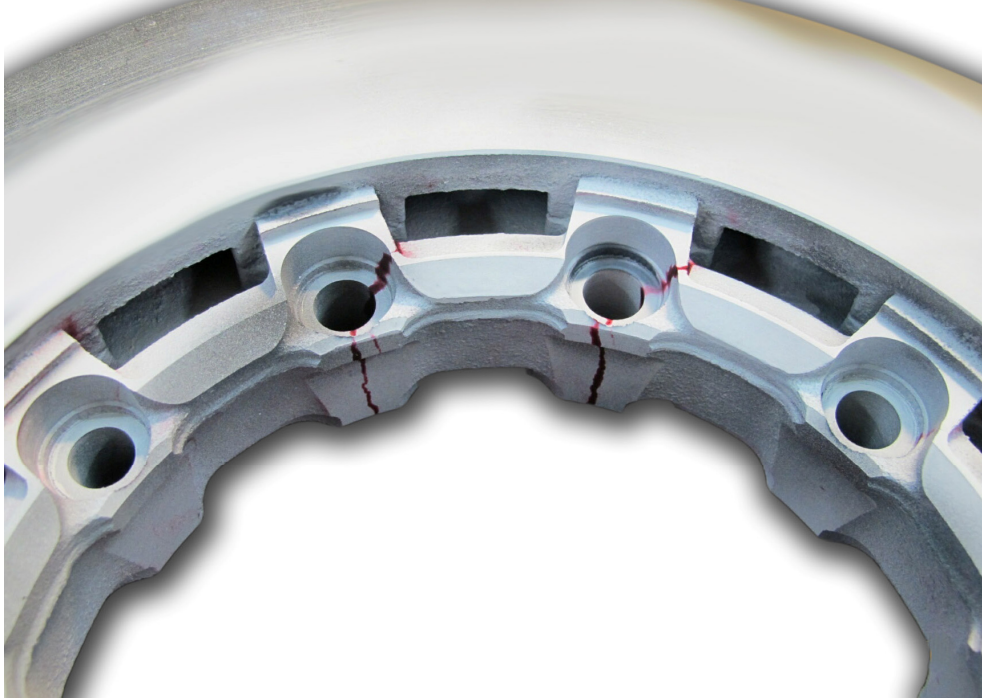


Alexander Geis  
President Aftermarket Business Unit

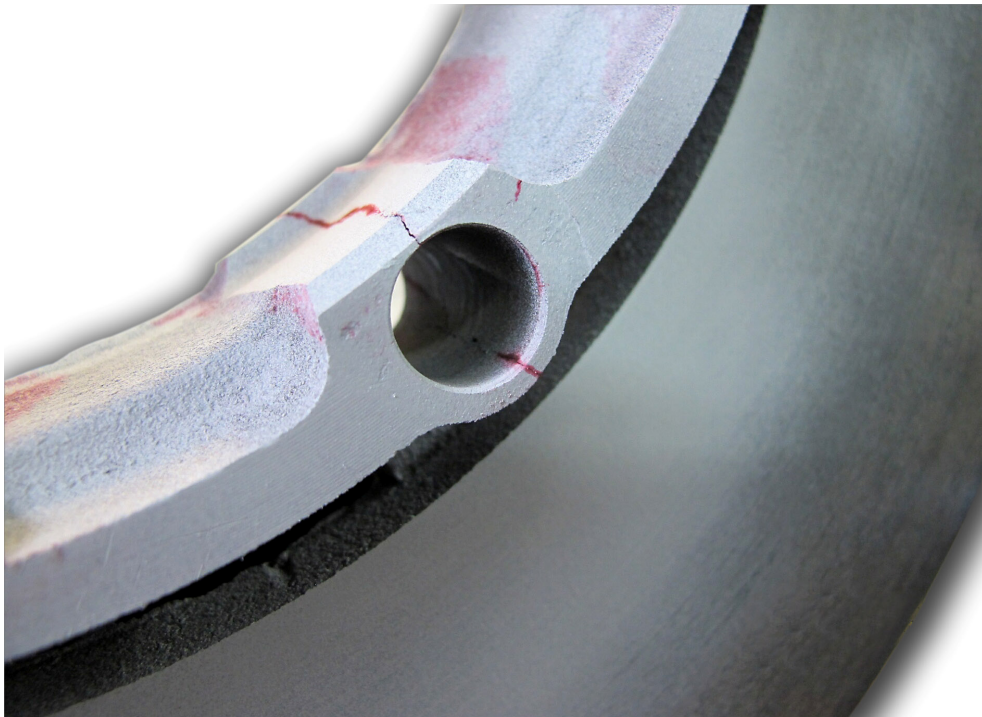
Attachment:

- Images

**SAFETY NOTICE, INTEGRAL copy brake discs**



**Figure 1: Continuous tension cracks in the area of the through-holes as the one-piece manufacture of the brake discs**



**Figure 2: Continuous tension cracks in the area of the through-holes as the one-piece manufacture of the brake discs**

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**Figure 3: Continuous tension cracks in the area of the through-holes as the one-piece manufacture of the brake discs**