

Shim Seats – Wear and effect on insert life



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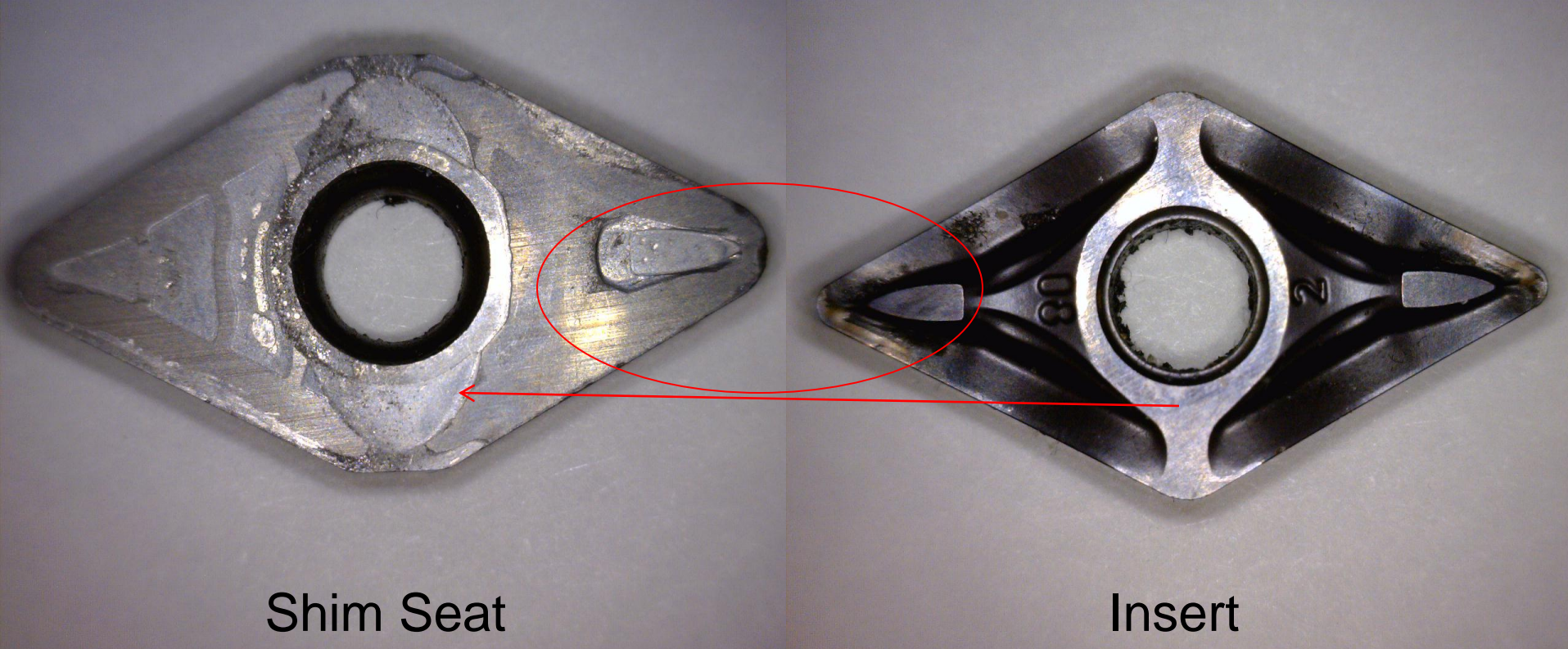


Shim Seats – Wear and effect on insert life

- **The following slides show wear on shim seats that leads to premature insert failure**
- **The form of the insert seating surface is pressed into the surface of the shim.**
 - **Typically this is caused by long term usage of the shim in demanding applications**
 - **It is especially prevalent in interrupted cuts and heavy feed rate applications**
 - **This effect also happens in more moderate operations, although it takes longer to appear**

Shim Seats – Wear and effect on insert life

- **When an insert with a different seating surface form is located on the shim, the insert is not supported properly.**
- **This allows the insert to move under the stresses of machining, and leads to chipping and failure of the cutting edge.**
- **Even with the same insert geometry, support of the insert is no longer ideal, and can cause premature failures.**

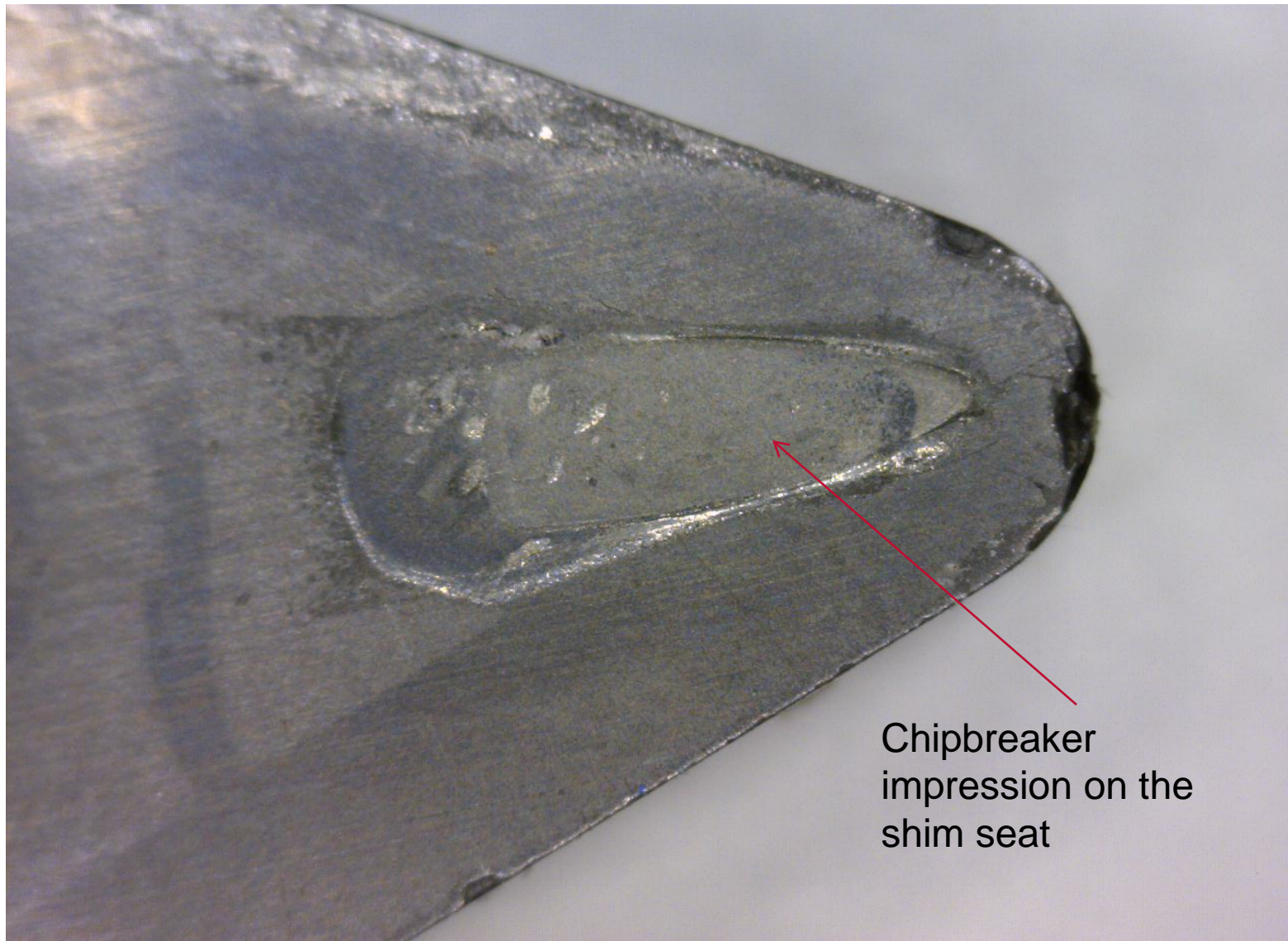


Shim Seat

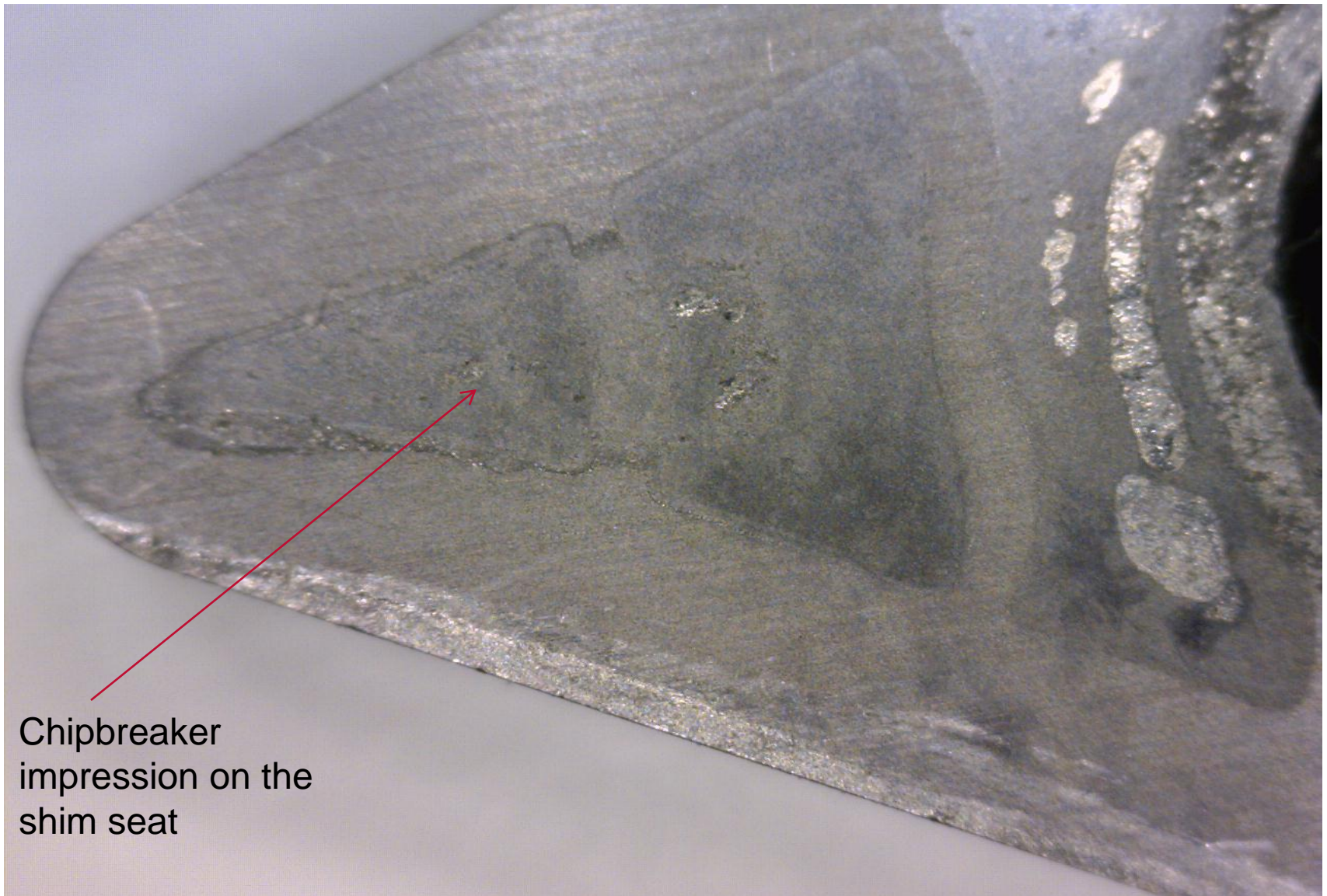
Insert

There is a Mirror image of the insert impression on the Shim Seat. This will cause breakage due to mis-location of the insert. It may not seat flat in the pocket and properly locate & lock down against the walls of the insert pocket.

- **Recommendation - the set-up technicians and operators should review the shim seat after each insert indexing and replace shims regularly.**
- **This issue can cause size and surface finish problems on the part as well as premature failure of the cutting edge.**

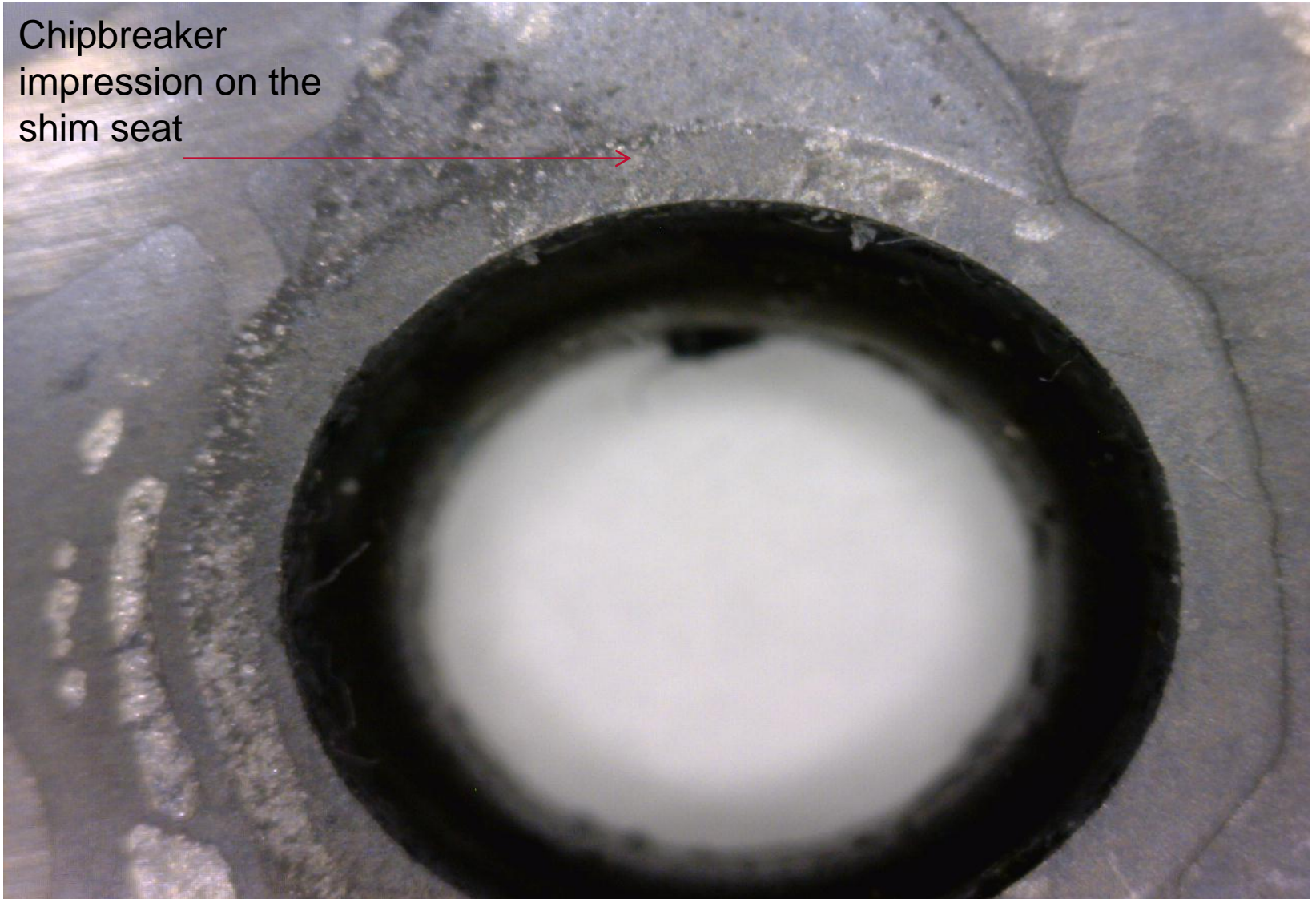


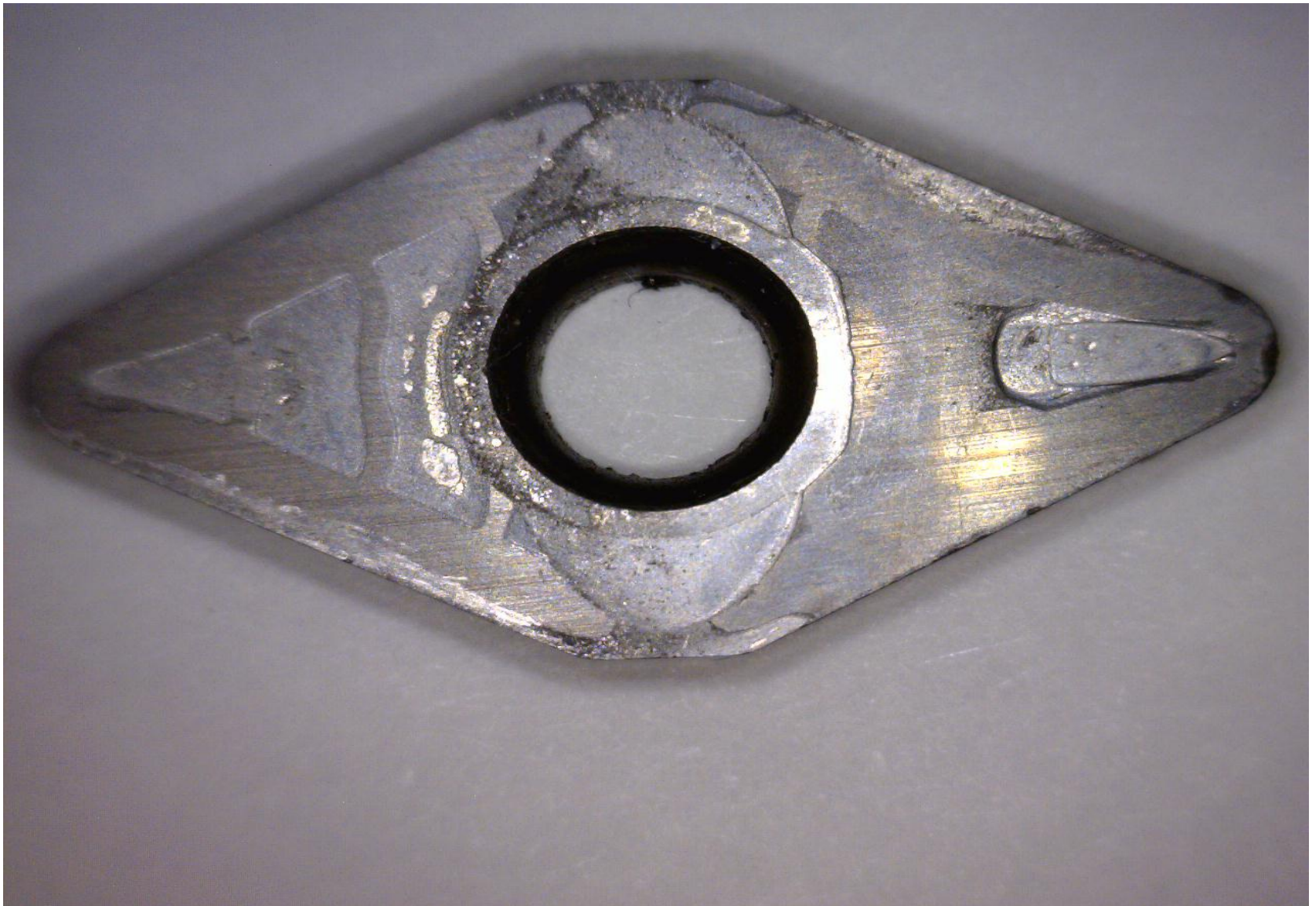
Chipbreaker
impression on the
shim seat



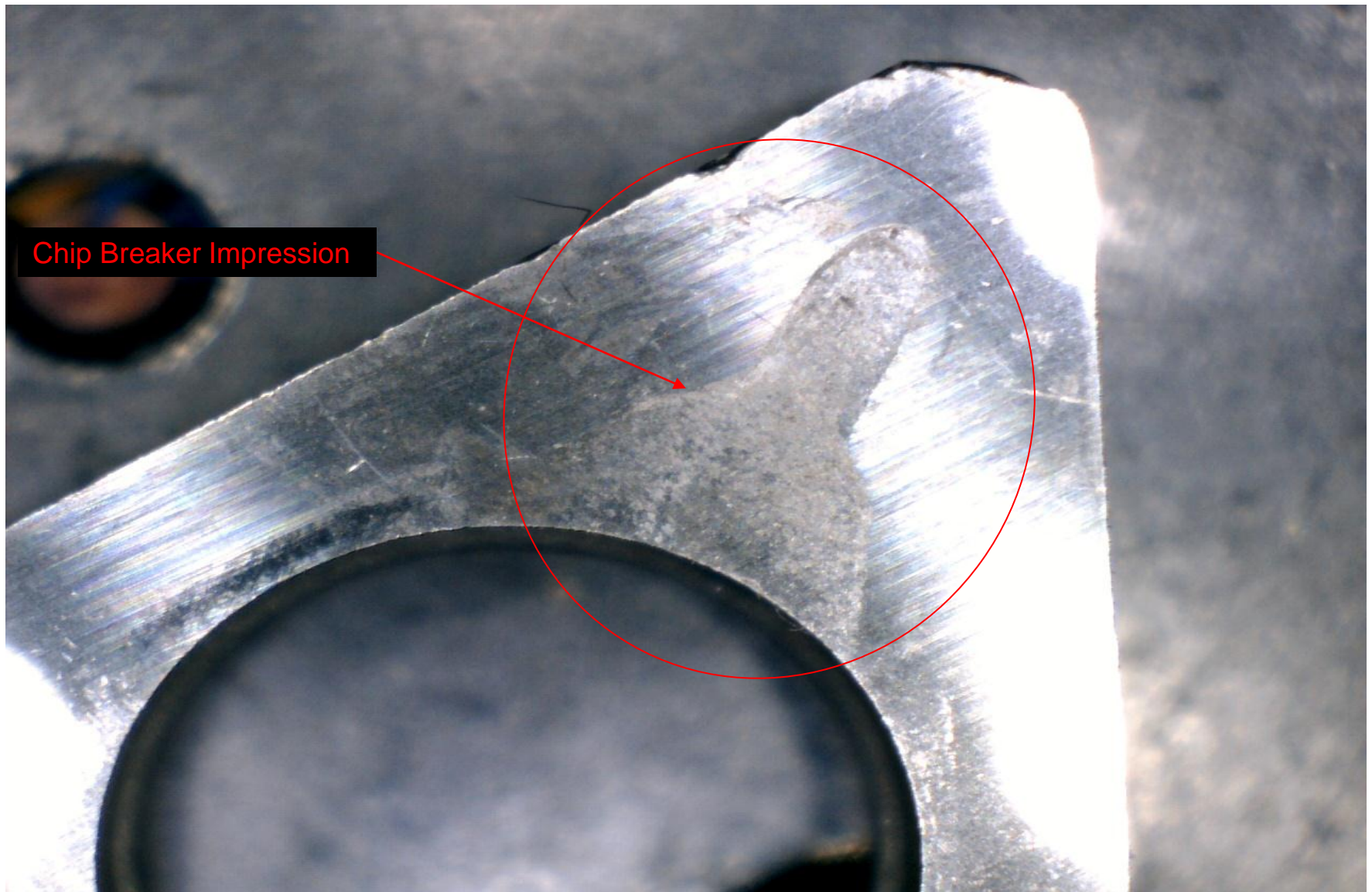
Chipbreaker
impression on the
shim seat

Chipbreaker
impression on the
shim seat





Bad Shim Seat



Bad Shims



22 parts





Thank you.

