

Components

Typical Expandable Cavity for
"A" Side Striker Insert



Typical Expandable Cavity for
"B" Side Striker Insert

General maintenance

After 100-200 initial shots, the Expandable Cavity should be rechecked to ensure proper mechanical function.

A routine maintenance program of your Expandable Cavity System is recommended after 50,000 to 100,000 cycles. Thoroughly degrease and demagnetize system components. Observe for signs of abnormal wear. A light lubricant such as a P.T.F.E. should then be applied to the Striker Insert, Center Pin and the Expandable Cavity. This will increase the life of the system components. Never use a heavy grease. Re-install Expandable Cavity System.

If this maintenance procedure is performed as described above, several million cycles are easily obtainable.

Expandable Cavity

The Expandable Cavity is typically made of A-2 tool steel, hardened to 54-58 Rockwell "C". The typical tool has four segments which expand radially away, under their own spring force, from the center axis of the tool. In the closed molding position, the precision fit between each segment permits flash-free molding.

Striker insert

The striker insert is made from different types of tool steel. It is typically hardened to 32-45 Rockwell "C" scale, depending on the application. The striker insert has a lower hardness than the Expandable Cavity to ensure the eventual wear will occur on the striker insert and not the detailed Expandable Cavity. Depending on the part configuration, the striker insert can be used in the "A" or "B" side of the mold (see Figs. 1 and 2 for details).

The striker insert must be closely fit to the Expandable Cavity to ensure that in the **mold closed** position the segments are completely sealed against one another. The tolerance on this fit must be held to ± 0.0005 inch to ensure flash-free molding.

Interchangeable center pin

The solid center mandrel is the most common type of center pin. It may have an inner cooling channel depending on its size. The center pin provides an internal shut-off with the Expandable Cavity.

Ejector sleeve

An ejector sleeve is commonly used to ensure part ejection from the cavity. The sleeve rides forward over the center pin, once the mold is opened and the cavity expanded. Many times the expansion needed is dependent on leaving clearance for the ejector sleeve.

Expansion limiter sleeve

If part design is such that it could tend to stick in the "A" side of the mold when the Expandable Cavity opens, an expansion limiter sleeve can be used. This sleeve will restrict expansion and retain the part until activation of a stripper plate allows additional expansion prior to part ejection (see Fig. 3).