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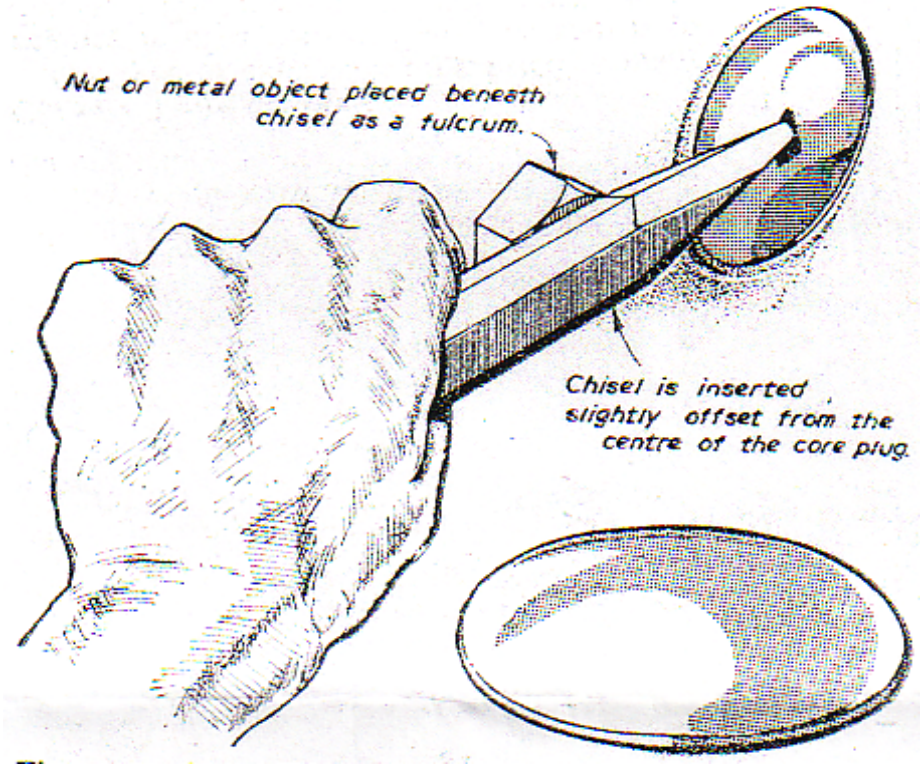
Defective Core Plugs

Types Discussed and. Method of Replacement



Figs. 1 and 2.—(Right) A typical expansion or core plug that is fitted to many cylinder blocks. (Left) The defective core plug is removed by inserting a chisel as explained in the text. A fulcrum point is established by placing a nut or metal object beneath the chisel.

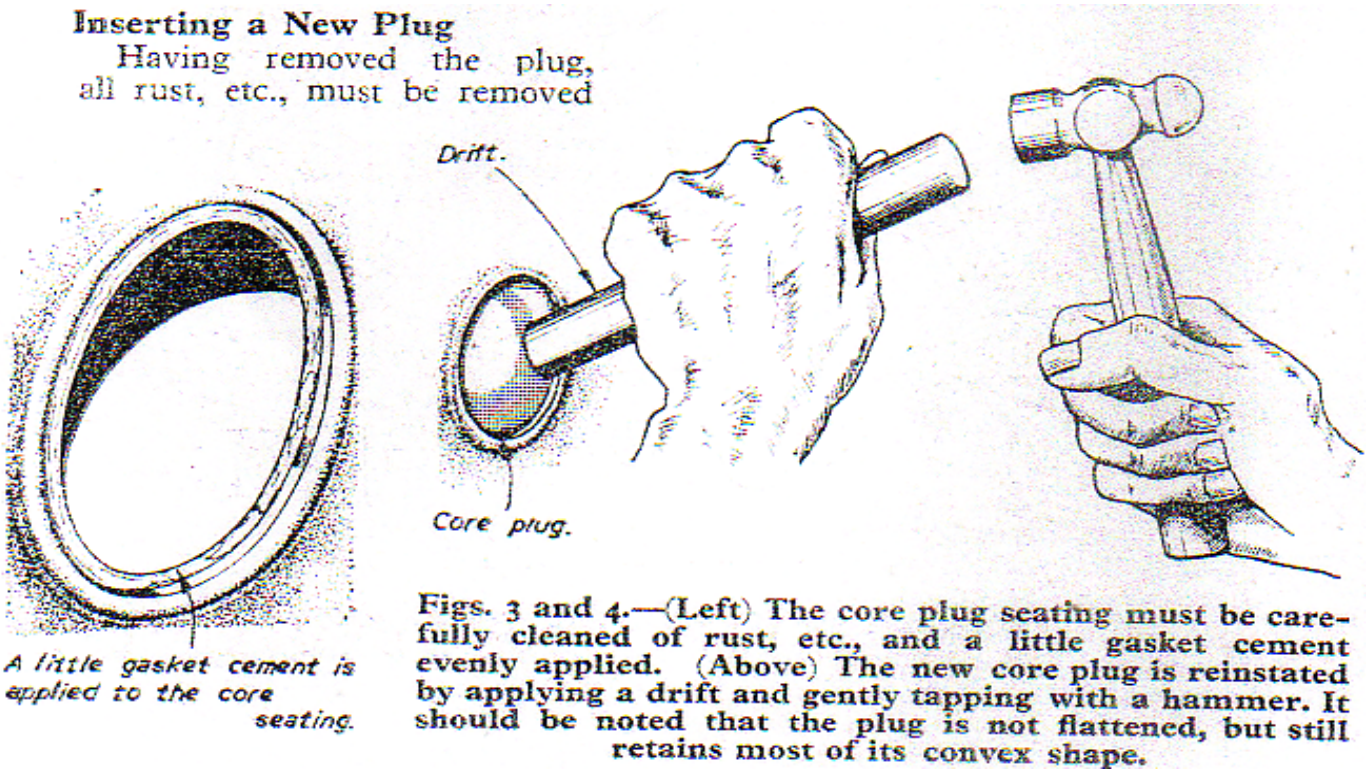
A DEFECTIVE core or expansion plug is indicated by a slight leakage of coolant at this point. A replacement should be made at the earliest possible opportunity as there is a danger that the plug will suddenly collapse, and by draining the cooling system of water may severely damage the engine.

Convex Type of Plug

The type of expansion plug fitted to many engines is of a convex shape, as shown in Fig. 1. The method of replacement is as follows. The engine should be started up and allowed to run until thoroughly warmed up. It is then switched off and the coolant drained from the entire system, not forgetting the cylinder block drain tap if one is fitted. The latent heat that still exists in the block metal will then effectively dry out the faces and seating of the expansion plug. The plug is removed by inserting a small cold chisel, slightly offset from the centre, then placing a piece of metal, such as a large nut, on the underside of the chisel as a fulcrum, then levering the core out (Fig. 2). Care must be taken not in damage the core seating during removal, otherwise difficulty may be experienced in making a water-sight joint when replacing the plug.

Inserting a New Plug

Having removed the plug, all rust, etc., must be removed from the seating and a little gasket jointing cement carefully applied (Fig 3). The new plug is then inserted with the convex side outwards. It may be a close interference fit and a light tapping slightly offset from the centre, with a hammer and punch around its periphery may be necessary to seat the plug. When the plug is in position, it is slightly flattened with a fairly large drift to ensure a water-tight joint (Fig. 4). It should be noted that the plug still retains its convex shape and is not flattened with the drift. The cooling system is then filled with water and the plug carefully inspected for any leaks which, if evident can be stopped by retapping the plug with the drift.



Figs. 3 and 4.—(Left) The core plug seating must be carefully cleaned of rust, etc., and a little gasket cement evenly applied. (Above) The new core plug is reinstated by applying a drift and gently tapping with a hammer. It should be noted that the plug is not flattened, but still retains most of its convex shape.