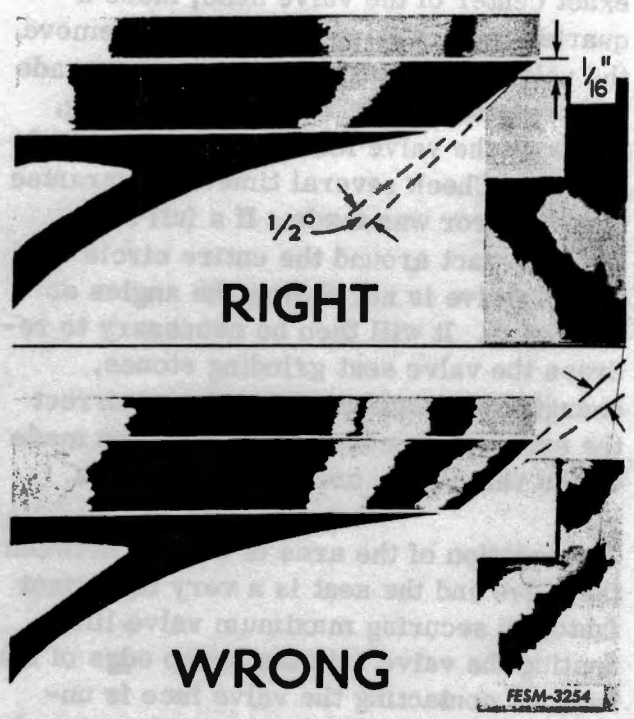
This is done to avoid the possibility of grinding a reverse interference angle, and to help prevent the accumulation of combustion deposits on valve faces and seats. It is nearly impossible for anyone to grind perfectly matching angles.



Grinding of valves to an interference angle provides line contact of the valve face to the seat for the first few hours of operation, allowing the valve and seat to "wear in" to a good tight contact. Interference angle has the effect of increasing the pressure per square inch on the seat, thus causing any deposits which cling to the face or seat to be squeezed out of the way and eventually blown out.

Valve Seats

The primary purpose of a valve seat is to seal the combustion chamber against pressure losses and to provide a path to dissipate the heat accumulated in the valve head so as to prevent burning of the seat and warping of the valve head.

The location of the valve seat on the valve face and its width, controls the amount of valve head that protrudes into the combustion chamber. It is obvious that the greater the exposure within the combustion chamber, the higher the valve temperature; or in other words, the more heat it will collect. High valve temperature and poor heat dissipation also produce excessive valve stem temperatures. This will hasten the accumulation of carbon on the stems, causing them to stick in the guides.

Refacing Seats

Remove all carbon, scale and oil before attempting to reface valve seats. The grinding stone, when placed against an oily seat, will become fouled, and uneven grinding will occur.

NOTE: Before installing the pilot, be certain that the valve guides are perfectly clean and meet the engine specifications. This is important; otherwise, an eccentric seat will be cut.