direction as it will go. The difference in these two readings, will be the actual end play. Add .001" to the difference between the two readings, which should be the thickness of the additional shims to be added. Remove the mounting flange, slide the rotor into the keeper 57314-D, then add the required number of shims (2), Illust. 100, in the proper location. Grease bearings, reassemble the rotor and the mounting flange and check the rotor for free turning. The preloading of the bearing should not cause binding of the rotor. Be careful not to overfill the bearings with grease; just fill the spaces between the balls of the bearings with I.H.C. magneto grease.

IMPORTANT: Be sure to keep the rotor and bearings clean during this operation. Do not drop the magnet or hit it with any sharp instrument, because it is very brittle and will chip readily.

Extreme care must be exercised to assure that the rotor is free from metal chips before it is assembled into the magneto as chips may jam the rotor. The magnet is highly magnetized and will draw all magnetic metals to it. Using compressed air is one of the best methods to clean the rotor.

Removing and Replacing Bearing Races

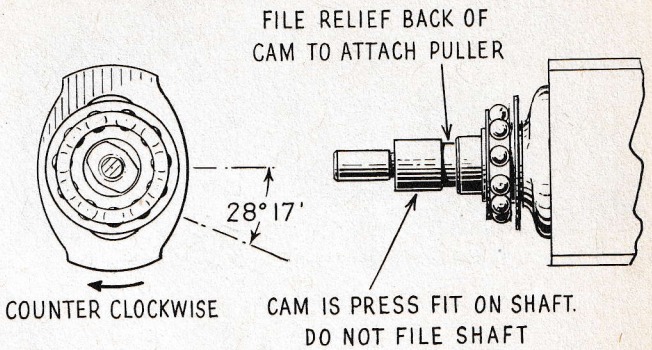
The ball bearings and outer bearing races are similar to those used in the F-4 and F-6 magneto and may be removed and replaced in the same manner, i.e., with tools No. SE-1020 and No. SE-1021 as outlined and illustrated on Pages 22 and 23. The inner race may be removed with tool No. SE-839 as explained on Page 22.

Magneto Magnet

As stated before, the magnet is part of the rotor and is the revolving member of the magneto. The magnet, made of a new alloy known as Alnico (an aluminum, nickel, cobalt and iron alloy), is cast directly into sand moulds. After it is once thoroughly magnetized, this magnetic material should never lose its magnetism if carefully handled.

We cannot stress too emphatically the importance of being careful to guard against metal chips adhering to the magnet. The use of compressed air is one of the best methods of cleaning the magnet and rotor before assembly into the main frame of the magneto. The clearance of the magnet and the pole pieces of the magneto is so close that any chips adhering to the magnet may cause the rotor to become jammed.

Breaker Arm Cam



ILLUST. 102--POINTS AT WHICH ROTOR MAY BE FILED IN ORDER TO REMOVE CAM.

The breaker arm cam (2) Illust. 85 should last indefinitely if it is properly lubricated. If the cam should become worn, it is so designed that it may be replaced. If the cam is to be replaced, install the new slow rise cam 60094-D as outlined in Service Bulletin S-3738A-1713. This cam has greatly increased radii at contacting surfaces and provides a slower rise cam to overcome vibration of breaker arm at higher speeds, lengthen life of breaker arm and breaker points, and improve grease retention. The cam can be replaced as outlined below.

Remove the rotor from magneto:

1. Place magneto in a vise by holding it in the flange.

2. Remove the impulse coupling:

   a. Insert a nail or pin through the hole in the coupling drive member.

   b. Remove nut by applying a socket wrench to the nut, and an open end wrench to one of the driving lugs.

   e. Pull drive member and impulse coupling complete by using puller tool SE-912.

3. Remove key from shaft.

4. Remove mounting flange (4 cap screws).

5. Remove distributor cap and distributor rotor.

6. Remove magneto body (3 capscrews).

7. Withdraw rotor from body and attach keeper 57314-D to magnet of the rotor.