



# MECHANICAL COMPETITION

This competition will have a two-part contest, where the Artificers will be able to display their talent in accurately measuring shaft journals and end frame bores. The Artificer who has the quickest and most accurate data collected will be crown chapter champion.

## How it Works

Each contestant will receive a player's data collection sheet (Player's Card). The card will identify three shaft journals (rotor A, B, etc.) and three end frames (likewise) to measure along with an elapse time slot for each part.

### Part 1: Shaft Journals

In a que area (table) will be three motor rotors with (3) different size journals on each side of the rotor (making a total of six different journals). This will give us room for three contestants in the que at the same time and the ability to rotate rotors after each round. Each station will have a manual calibrated micrometer. Players, using their own stopwatch (phone) will start a timer and begin to measure all three journals from the same side of the rotor (designated A1 or A2). Record each journal size for a total of three, once all three sizes have been written down on the player card, hit the stop button, then record elapse time on player card.

### Part 2: End Frames

In a different que area (table) from Part 1 will be nine different motor end frames or three stations of three end frames all with different bore sizes. This will give us room for three contestants in the que at the same time. Each station will have a manual bore gauge and manual calibrated micrometer. Players, using their own stopwatch (phone) will start a timer and begin to measure all three end frames in their set. Record each bore size, for a total of three, once all three sizes have been written down on the player card, hit the stop button., then record elapse time on player card.

### Judge's Table

Each judge will have "Player Card" template with correct measurements for all journals and end frame bore sizes. Judges are to check each journal and end frame for accuracy. A one second penalty will be added to the recorded elapse time for every 0.001" of an inch over or under correct measurement for each journal and end frame. Each "player card" must have three shafts and three end frames sizes recorded or Artificer will be disqualified. The Artificer with the lowest total time wins the mechanical championship.