



The below precision bearing break in procedure can be used as an example or starting point for a customized break in procedure. A couple of the key aspects are;

- Starting out at a much lower RPM than the application RPM
- Waiting for the temperature to homogenize before increasing the RPM

There are 2 overarching steps for the break in procedure

1. Short Intervals
2. Continuous running

1. Short Intervals

The spindle should be brought up to speed in short intervals whereas the interval speed ranges from a portion to full nominal speed. The respective speed has to be achieved within 20 seconds and should be held for approximately 1 minute. The complete cycle should be set up similar to;

- a) 5 cycles of 1 minute each at 33% of max RPM
- b) 5 cycles of 1 minute each at 66% of max RPM
- c) 5 cycles of 1 minute each at 100% of max RPM

****All cycles should have a 2 minute rest period between the short runs.****

| | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|
| Short Interval | | | | | | | | |
| Rest | | | | | | | | |
| Continuous Run | | | | | | | | |
| 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |

*Numbers are minutes of run time.

| |
|-----------------------|
| 5 minutes Rest |
| 30 minutes Continuous |
| 5 minutes Rest |
| 30 minutes Continuous |
| 5 minutes Rest |

3. Continuous running

For the continuous running cycle, the spindle should be operated at nominal or max nominal speed for approximately 30 minutes. No external loads should be applied to the spindle during this time.

- a) 2 cycles of 30 minutes each at nominal or max nominal operating speed
 - a. 5 minutes rest period in between and after the cycles

KEY NOTES

- I. At any time during the run in, the procedure should be stopped if the spindle rises above ~60°C [140°F]. The location of the temperature sensor must be taken into account. A temperature sensor on the housing of the spindle will read much cooler than what the bearings are actually running. Please consult product documentation for temperature limits or consult GMN USA engineering for technical support.
- II. At any time during the run in, the procedure should be stopped due to excessive noise or vibration. This characteristic is relative per a specific application, but is a direct value for bearing performance. If ones specific parameters are unclear, please consult GMN USA engineering for technical support.
- III. The viscosity and volume of grease fill will have an effect on the break in procedure – i.e. time at each step. Ensure that spindle temperatures homogenize before moving to higher RPM’s. This will be directly related to max temperatures during the break in.