2.17.3 Jitter

Jitter of the disk motor speed shall be less than 1.8% peak - peak when measured at a motor speed of between 390 and 605 RPM. Jitter is defined as:

$$\text{Jitter} = \frac{4\ Sx}{Sm} \times 100\%$$

where : Sx is the standard deviation of the TACH pulse period sampled randomly 100 points and Sm is the mean of Tach pulse period.

2.17.4 Thermal drift

Thermal drift of disk motor speed for any speed between 390 and 605 rpm shall be less than 3%. The definition of the thermal drift:

$$\text{Thermal drift} = \left| \frac{Vx - Vr}{Vr} \right| \times 100\%$$

where : Vr : Disk motor speed at 25 C ambient temperature.

Vx : Disk motor speed between 5 C to 50 C ambient temperature.

2.17.5 Initial drift

Initial drift of disk motor speed shall be less than 1.0%. Initial drift is defined as:

$$\text{Initial drift} = \left| \frac{Vx - Vr}{Vr} \right| \times 100\%$$

where : Vr : Disk motor speed at 1 sec after disk motor is turned on.

Vx : Disk motor speed at 120 sec after disk motor is turned on.

2.17.6 Speed - Torque characteristics

The change of speed with torque is:

Ratio of speed/torque : -0.25% /gram cm