

After running the FEA on our part with no boundary conditions, the frequency results are much closer to are measured results. Previous FEA on frequency had given us a first mode of approximately 275 Hertz. However, after removing the restraints and forces, the FEA predicted the first non-zero mode to be 450 Hertz, close to our measured frequency of approximately 490. For some reason, the Cosmos returned the first 6 modes as having a frequency of zero, possible coinciding with the six degrees of movement. We feel that the fixing of the two restraints caused the inaccuracy in the first FEA. These restraints would have acted as two artificial nodes, giving improper estimates since the points were not fixed during testing.