Mechanical APDL 2023 Workstation Benchmark Descriptions

| Job	Description	GPU Option	Notes
V23iter-1	PCG solver, symmetric matrix, 23.3m DOFs, static, linear, structural analysis	NVIDIA	Medium sized job for iterative solvers, at least 40 GB RAM required, good test of memory bandwidth
V23iter-2	PCG solver, symmetric matrix, 19.2m DOFs, static, linear, structural analysis	NVIDIA	Large sized job for iterative solvers, at least 55 GB RAM required, good test of memory bandwidth
V23iter-3	PCG Lanczos eigensolver, symmetric matrix, 25m DOFs, modal, linear, structural analysis requesting 10 modes	NVIDIA	Large sized job for iterative solvers, at least 70 GB RAM required, good test of memory bandwidth
V23direct-1	Sparse solver, symmetric matrix, 10m DOFs, transient, nonlinear, structural analysis	NVIDIA	Large sized job for direct solvers, should run incore on machines with 75 GB or more of memory, good test of processor flop speed if running incore, and I/O speed if running out-of-core
V23direct-2	Block Lanczos eigensolver, symmetric matrix, 3.4m DOFs, modal, cyclic symmetry, linear, structural analysis requesting 50 modes	NVIDIA	Large sized job for direct solvers, should run incore on machines with 150 GB or more of memory, good test of processor flop speed and memory bandwidth if running incore, and I/O speed if running out-of-core
V23direct-3	Sparse solver, symmetric matrix, 16.1m DOFs, transient, nonlinear, structural analysis with 1 iteration	NVIDIA	Large sized job for direct solvers, should run incore on machines with 256 GB or more of memory, good test of processor flop speed if running incore, and I/O speed if running out-of-core

Mechanical APDL 2023 Workstation Benchmark
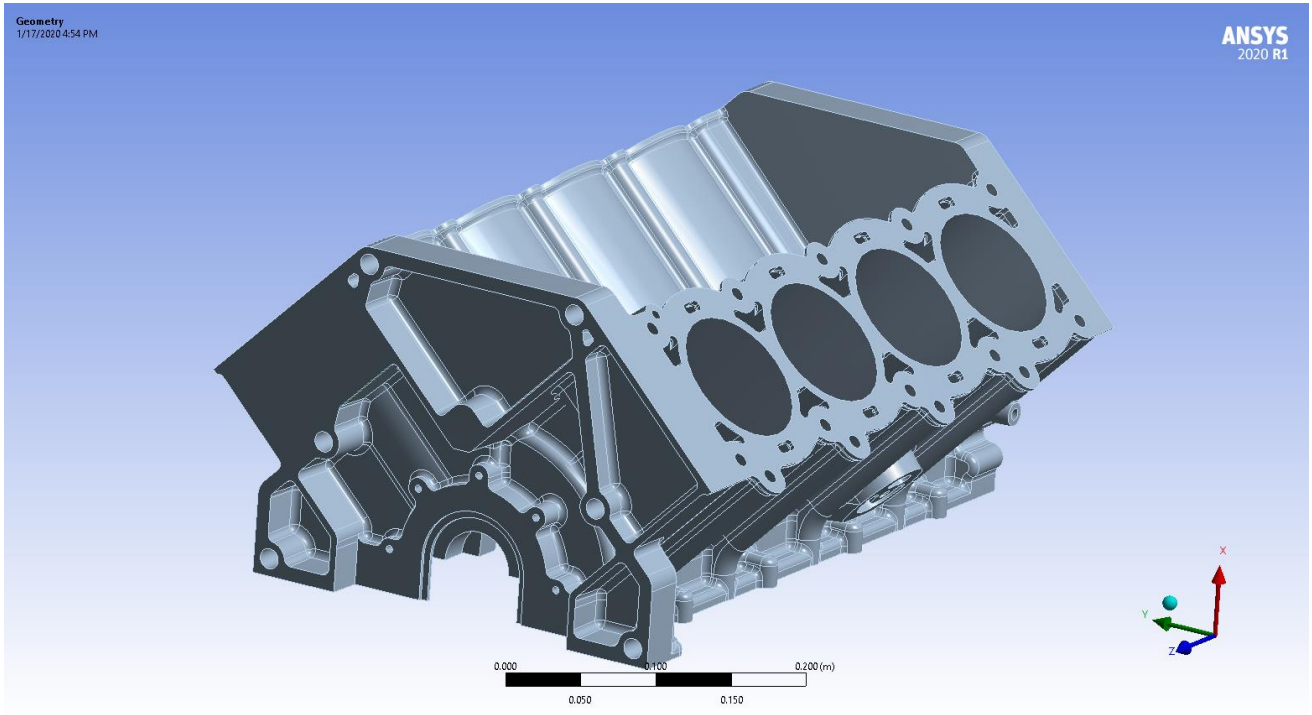
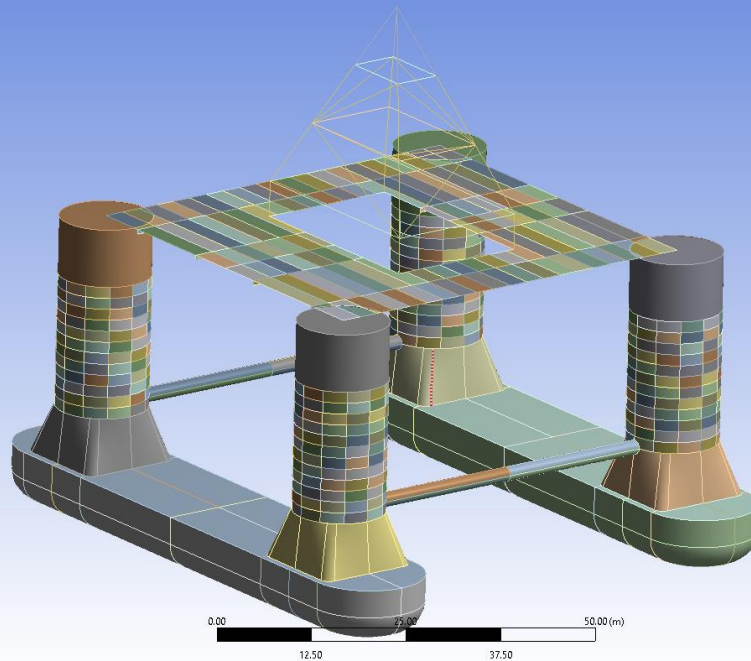## V23iter-1 Benchmark Model
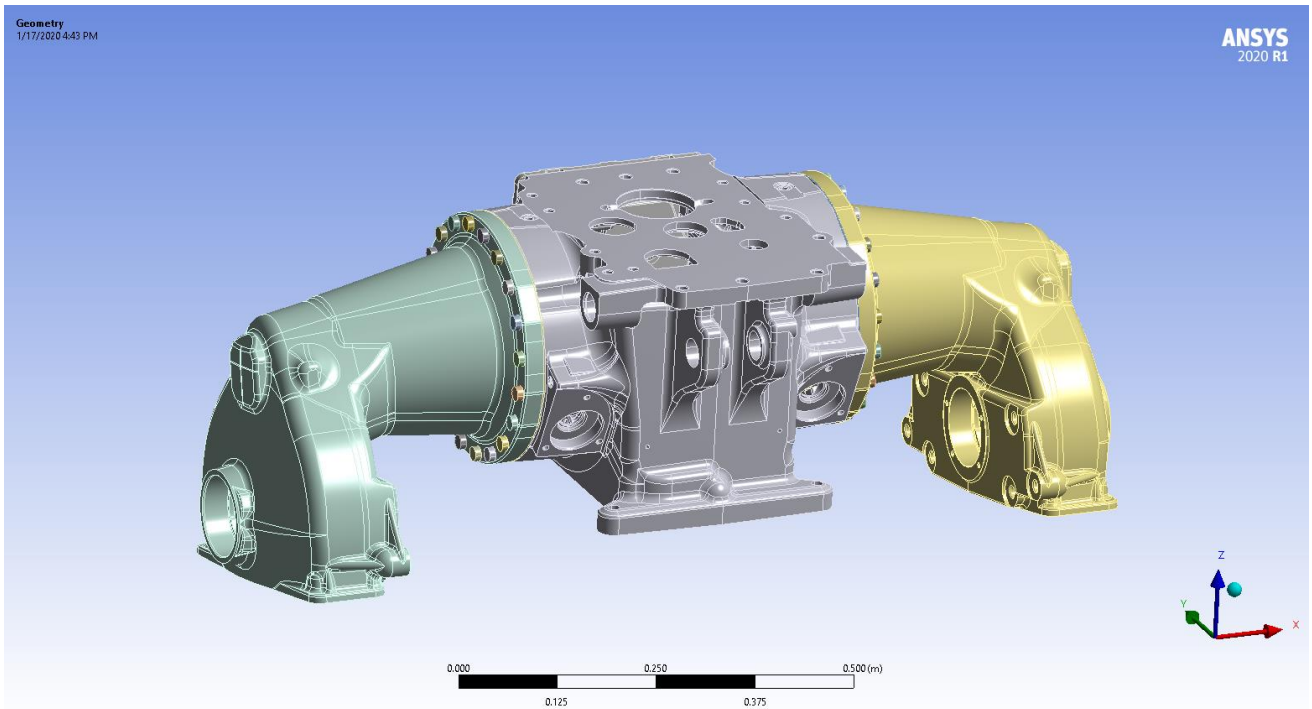
V23iter-2 Benchmark Model
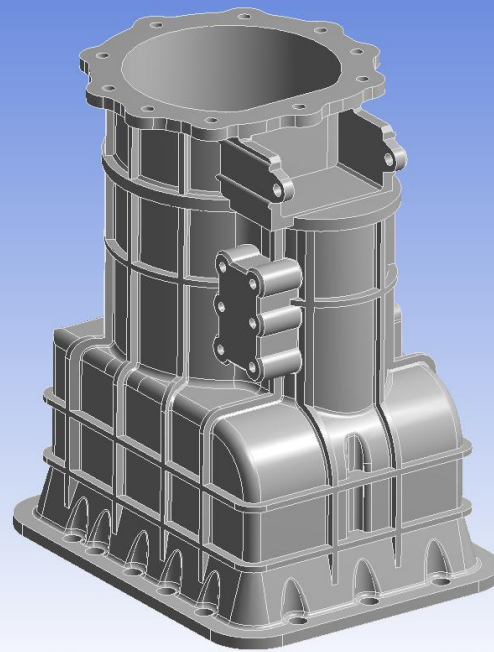
V23iter-3 Benchmark Model

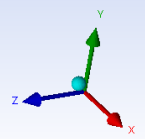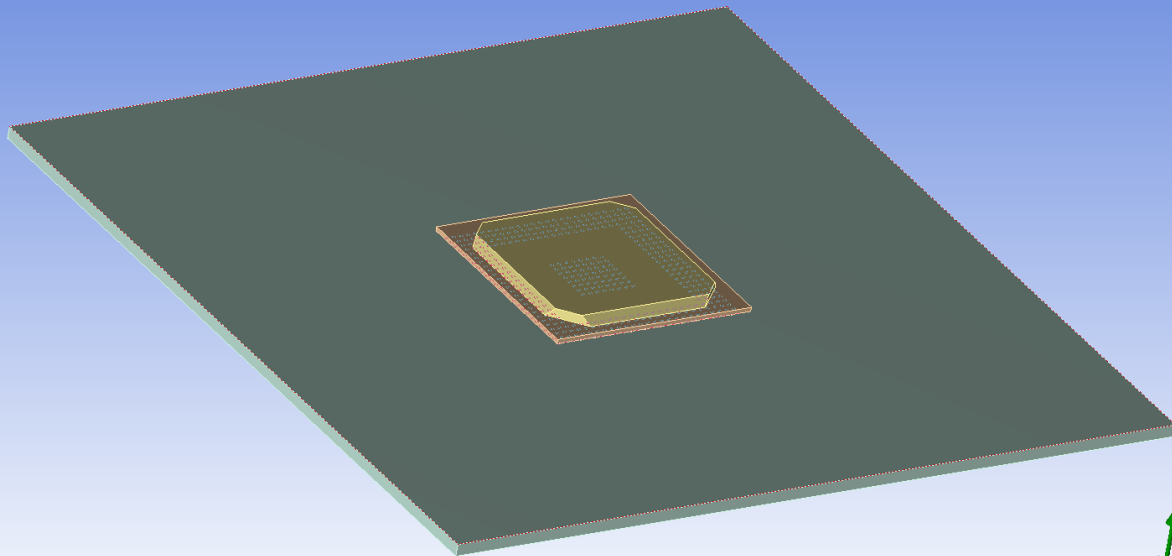**V23direct-1 Benchmark Model**
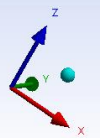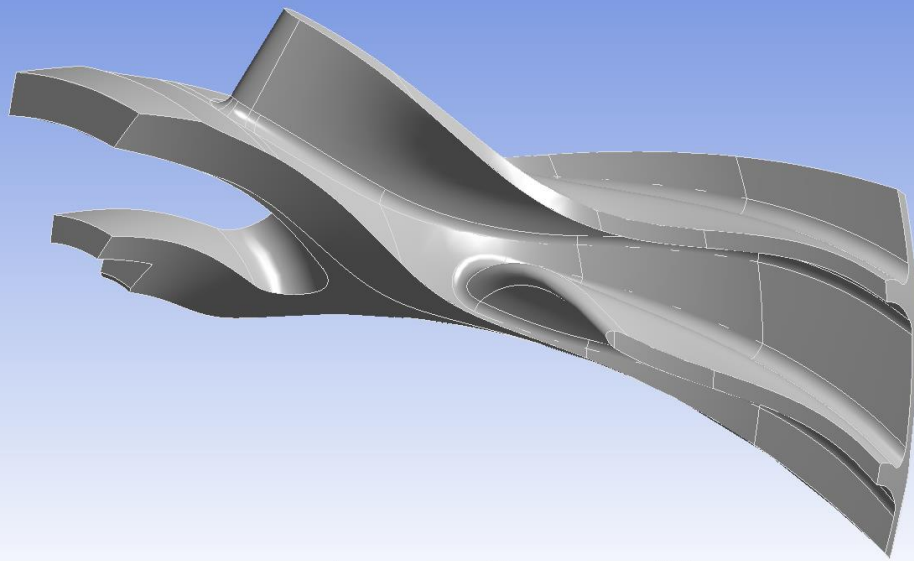
V23direct-2 Benchmark Model

V23direct-3 Benchmark Model