

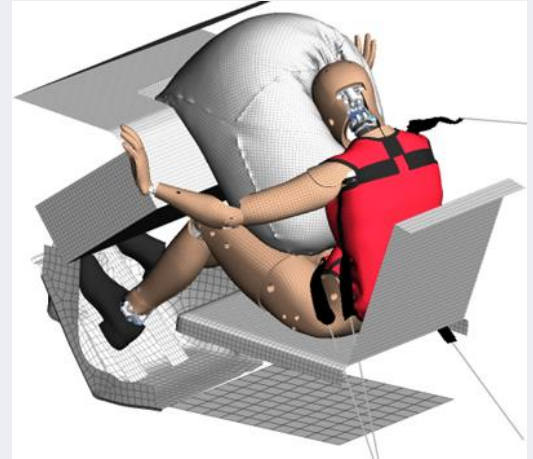
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# HUMANETICS CAE UPDATES



## THOR-5F

- [THOR-5F](#) v1.2 represents latest SBL-B hardware
- Material models are updated to represent the latest hardware including abdomen, pelvis, face insert, arms and legs
- The model is validated with component and full dummy certification tests
- It is tested for submarining in sled environment



## aPLI Borderline

- [aPLI Borderline](#) model v1.2.6 has an advanced and easy-to-use user interface
- It allows the user to utilize a model based on physical hardware performance
- The borderline model produces a response with <4% error to the 'user input' in the two respective inverse certification tests
- 16 targets including femur moments, ligament elongation and tibia moments will be matched by the algorithm



	Inverse Type 1		Inverse Type 2	
Femur upper	112.1   128.2	138.0   128.3	147.2   128.6	172.1   181.6   161.4
Femur mid	129.2	276.0   155.5	149.5   1	228.2   228.6   213.5
Femur lower	142.1   129.5	207.1   181.8   193.7	137.1   182.4	232.1   224.8   277.6
MCL	11.0	34.0   14.0	10.0   1	33.0   24.0   22.0
Tibia upper	191.1	340.0   312.0	190.1   1	188.0   180.0   220.0
Tibia mid upper	222.1   242.0	201.1   225.0   224.0	122.1   128.1	135.1   122.0   222.0
Tibia mid lower	182.1   141.1	178.2   145.0   169.9	122.1   121.1	134.0   148.0
Tibia lower	21.0   21.7	201.0   218.0   97.3	81.0   79.1	61.1   83.0   72.1

## THOR-50M Borderline

- [THOR-50M Borderline](#) tool allows the user to specify the thorax stiffness to match specific physical dummy test data and study the effect of thorax variation
- The model is based on THOR-50M v1.8 USNCAP and EuroNCAP
- Chest deflections from certification tests can be given as input by the user which the tool uses to generate a customized model
- With the help of borderline model, variability of hardware can be accounted for in the product development

