

MECHANICAL TESTING TO ANSI/BIFMA X 5.1-2002 Compared against 2011 Final Association Ballot

ANSI/BIFMA X 5.1-2011	Comparison	Conclusion
5. Back strength test (Type 1)	Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position.	Same
6. Back strength test (Type 2 & 3)	New: test not applicable for samples with backrest height less than 200 mm (7.9 in.).	Same
7. Base test	Stems inserted in the base are now required for support: The stress distribution will be changed considerably	Testing required
8. Drop test	For chairs "with lockable seat angles", this includes tilter chairs, the drop test needs to be done now with the seat unlocked; this will make the test much easier to pass. New test set up requirement for chairs with long stem glides. Generally speaking it will not impact the test outcome for most of the chairs.	No testing required
9. Swivel cycling test	Load on sample while testing changes from 102 Kg to 113 Kg (225 to 250 lbs)	Testing required
10. Tilt mechanism test	Same as before	Same
11.2. Seating impact test	The drop height was increased from 25mm to 30 mm (1" to 1.2") which yields a higher impact force on the seat. Same test bag mass as before with some slight modification to the bag (metal ring on the top part).	Testing required
11.4. Front Corner Load-Ease Test - Cyclic	Same as before	Same
12.3. Rear Stability test	New test completely different from the previous version. Similar to ISO 21015. The test is now performed using a stack of disks rather than a monolithic mass. FO or type III chairs the test forces applied to the highest disk varies with seat height. Results to date seems to demonstrate that the test is more difficult to comply with than before for type I and II chairs.	Testing required
12.4. Front Stability	Same as before	Same

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13. Arm strength test - Vertical	Only pull down is now allowed; no push down. The forces were reduced from 200 to 169 lbf (functional) and from 300 to 253 lbf (proof)	If your testing was done at Micom you don't need to re-test . If it was done somewhere else you should verify how your testing was done as pushing instead of pulling gives tests outcomes that can be quite different
14. Arm strength test - Horizontal	Same test, same requirements, figure #14 improved.	Same
15. Backrest durability (Type 1)	Minor changes for specific applications i.e.: width of bridging device... Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position. For most chairs the test is the same.	Same
16. Backrest durability (Type 2 & 3)	Minor changes for specific applications i.e.: width of bridging device... Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position. For most chairs the test is the same.	Same
17. Caster/chair base durability test	Load increased from 225 lbs to 250 lbs. Excludes chairs with glide/casters combination	Testing required
18. Leg strength test - front application & side application	Proof load from 125 to 113 lbs for face application and 115 to 113 lbs for side application	No testing required
19. Footrest Static Load Test	New test: Introduction of a functional force of twice 100 lbs Proof load of 300 lbs. Applies only to chairs that can have their seat height adjust to 24" or higher.	Testing required
20. Footrest durability cyclic	Additional deflection parameters introduced for the first 500 cycles. Test # changed from 19 to 20.	Testing required
21. Arm durability test	Minor changes of no significance for the test outcome. Test # changed from 20 to 21.	Same
22. Out Stop Tests for Chairs with Manually Adjustable Seat Depth	Load on seat changes from 154 lbs to 163 lbs. Test # changed from 21 to 22.	Testing required
23. Tablet Arm Static Load Test	Same load but now applied for 1 minute instead of 5 minutes	No testing required
24. Tablet Arm Load Ease Test - Cyclic	Same as before	Same