BenchPro
(Test Report)

BIFMA INTERNATIONAL

General-Porpuse Office Chairs – Test
American National Standart for Office Furniture

CHAIR TEST NAME: 13. ARM STRENGTH TEST-VERTICAL-STATIC

CHAIR: LNT3-F, BASE: HTF-320,

START DATE: 08-26-2013

END DATE: 08-28-2013

Chair tests:

___ Backrest Stregth Test – Static (Type I)

___ Backrest Stregth Test – Static (Type II, III)

___ Base Test – Static

___ Drop Test – Dynamic

___ Swivel Test – Cyclic

___ Tilt Mechanism Test – Cyclic

__ Seating Durability Test – Cyclic

___ Stability tests

__x_ Arm Stregth Test – Vertical – Static

___ Arm Stregth Test – Horizontal – Static

___ Backrest Durability Test – Cyclic (Type I)

___ Backrest Durability Test – Cyclic (Type II, III)

___ Caster/Chair Base Durability Test - Cyclic

___ Leg Straght Test – Front and Side Application

___ Footrest Durability Test – Vertical - Cyclic

___ Arm Durability Test - Cyclic

___ Out Stop Test for chairs with Manually Adjustable Seat Depth

___ Tablet Arm Static Load Test

___ Tablet Arm Load Ease Test Cyclic

Type chair:

____X_____ Type I - Tilting Chair

_____X___ Type II – Fixed seat angle, tilting backrest

_____ Type III – Fixed seat angle, fixed backrest

Aplicability:

This test apply to all chairs with arms.

Purpose of the test:

The purpose of the test is to evaluate the ability of chair arm to withstand stresses caused by applying vertical forces on the arm(s).

Test Setup

a) The chair shall be placed on a test platform and restrained from movement.
b) If adjustable features are available, all adjustments shall be set at normal use conditions.
c) A loading device shall be attached to apply an initially vertical load uniformly along a 127 mm (5 in.) length along the width and length of the arm at the apparent weakest point that is forward of the chair backrest.
d) If applying the load with a cable and pulley system, the cable must initially be a minimum of 750 mm (30 in.) length from the attachment point to the pulley .

Test Procedures:

Functional Load

a) A force of 890 N (200 lbf.) shall be applied for one (1) minute.
with air cylinder diameter 2 inches Force = 65 lb/sq in.
b) Remove the force.

Proof Load

a) A force of 1334 N (300 lbf.) shall be applied for one (1) minute.
with air cylinder diameter 2 inches Force = 100 lb/sq in.
b) Remove the force.

Acceptance Level

Functional Load

There shall be no loss of serviceability

Conclusion: After the functional load on the arm strength test, the chair arms didn't loss serviceability, .

Proof Load

There shall be no sudden and major change in the structural integrity of chair. Loss of serviceability is acceptable.

Conclusion: After the Proof load on the arm strength test, the chair arms didn't loss serviceability, but the arm screws were loosened.

Test: Done

Video: Done

Photo: Done