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Test Report

CSA Z259.10-2012 (R2016)
Full body harnesses

Report no: 2.19.03.24

Client: Jinhua Jech Tools Co., Ltd
No. 1448 Tongxi Road
Bailongqiao Town
Jinhua City 321025
Zhejiang
China

Manufacturer: Jinhua Jech Tools Co., Ltd

Client order: T/0468

Date received: 25 January 2018

Model: JE136103B

Dates of tests: 8 March 2018 to 16 April 2018, and 13 March 2019

Signed:

Steven Sum, Laboratory Manager

Issued: 15 March 2019

Conditions

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Specimens will be disposed of four weeks from the date of this report, unless otherwise instructed.

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Summary of assessment*

Clause	Requirement	Assessment (See Key)
4.1	Fibre webbing ①	Ltd
4.2	Connecting components	Pass
4.3	Keeper	Pass
4.4	Tongue type buckles	NAp
4.5	Fall arrest indicator	Pass
4.6	Avoidance of the genital area	Pass
4.7	Classification	Pass
4.8	Class A – Fall arrest	Pass
4.9	Class D – Suspension and controlled descent	
4.10	Class E – Limited access	
4.11	Class L – Ladder climbing	
4.12	Class P – Work positioning	Pass
4.13	Alternative applications	
4.14	Alternative materials & construction	
5.2.1	Drop test - class A, feet first	Pass
5.2.2	Drop test - class A, head first	Pass
5.2.3	Drop test – class P	Pass
5.3	Fall arrest indicator static test ①	
5.3	Fall arrest indicator dynamic test ①	Pass
7.1	Markings	Ltd
7.2	Information	Ltd

① *INSPEC Interpretation applies*

Key

	Shading shows the clauses requested. Any other clauses were not requested.
Pass	Requirement satisfied.
Ltd	Testing requested was insufficient completely to verify compliance with the clause. Refer to the "Result details" section for more information.
Fail	Requirement not satisfied. Refer to the "Result details" section for more information.
NAs	Assessment not carried out.
NAp	Requirement not applicable.
NT	Requested but not tested due to early termination following failure.

* Assessment relates only to those specimens which were tested and are the subject of this report.

Submission details

Product	Quantity	Date received	INSPEC specimen no.
Full body harness, model JE136103B	04	5 February 2018	2F03301 to 2F03304
Webbing, yellow colour, part number JEW-1B2Y	10 m		2F03001A to 2F03001E
Webbing, black colour, part number JEW-2BLACK	10 m		2F03002A to 2F03002E

Procedures

The specimens detailed within the submissions above were used for the tests covered by this report.

Testing was performed in accordance with CSA Z259.10-2012 (R2016) unless otherwise specified below. Reference should be made to the standard when reading this report.

Unless stated otherwise, specimens were tested in the condition as received by INSPEC.

Testing was performed at INSPEC's laboratory in Kunshan, China.

The full body harness was first tested and reported in Inspec Test Report 2.18.04.16

This report was issued to include the assessments of the Markings and Information material.

Result details

4.1.1 Fibre webbing

Not assessed. Manufacturer to certify. NAs

4.1.2 Stitching and cut ends

Specimen 2F03301 was assessed.

a) All machine stitching was not assessed. Manufacturer to certify. NAs
b) The ends of all threads were not assessed. Manufacturer to certify. NAs
c) The cut finishes of all webbings were hot cut to prevent fraying. Pass

4.1.3 Width and strength

Specimen 2F03301 was assessed.

The minimum width of straps were as follows:

Waist straps	45 mm
Shoulder straps	45 mm
Thigh straps	45 mm
Sub-pelvic straps	45 mm

These were not less than the minimum 41 mm specified. Pass

When tested as specified with the 22.0 kN load, the straps 2F03001A to 2F03001E and 2F03002A to 2F03002E performed as follows:

Waist straps	withstood the test without breaking	Pass
Shoulder straps	withstood the test without breaking	Pass
Thigh straps	withstood the test without breaking	Pass
Pelvic straps	withstood the test without breaking	Pass

4.2 Connecting components

4.2.1 Full body harness component connections and terminations

Specimen 2F03301 was assessed.

Connection of all full body harness components to each other and terminations of all full body harness components were by means of Class I or Class II connectors. Pass

A dorsal D-ring was used to connect to fall protection system.

Buckles were used for connecting straps together.

4.2.2 Connection to systems or elements external to the full body harness

4.2.2.1 There were no external systems or non-integral elements. NAp

4.2.2.2 The full body harness was not integrally connected to a fall arrest systems or elements. NAp

4.3 Keeper

Specimen 2F03301 was assessed.

All webbing straps that end with a free end had a keeper loop of the required size to reduce the possibility of accidental disengagement of the strap from its functioning position. Pass

4.4 Tongue type buckles

Specimen 2F03301 was assessed.

Tongue buckles were not incorporated in the full body harness. NAp

4.5 Fall arrest indicators

Specimen 2F03304 was assessed.

The full body harness included a built-in fall arrest indicator. Pass

When tested as required by 5.3 and as specified in 6.2.6, the fall arrest indicator activated to give a permanent, readily visible warning. Pass

4.6 Avoidance of the genital area

Specimen 2F03301 was assessed.

Load bearing components of the full body harness, when worn correctly and properly adjusted did not pass over the genitals of the test subject. Pass

4.7 Classification

All specimens were assessed.

They satisfied the requirements of a Class A full body harness. Pass

The full body harness was classified as follows:
1) Class A: Fall arrest Pass
2) Class P: Work positioning Pass

4.8 Class A, Fall arrest

Specimen 2F03301 was assessed.

a) One Class 1 dorsal connector (part number JE516041) was affixed to both shoulder straps. Pass
b) The full body harness was not integrally attached to a certified subsystem or element with a dorsal Class I / Class II connector affixed directly to both shoulder straps. NAp

A sub-pelvic strap was fitted.

The dorsal connector was a sliding D-ring.

A back strap was sewn across both shoulder straps at the dorsal area to limit the downward creep of the D-ring towards the waist. Pass

4.12 Class P, Work positioning

Specimen 2F03301 was assessed.

A connector (D-ring JE516041) required for Class A was incorporated.	Pass
Two Class I connectors (D-rings JE516041) were fitted at the waist level.	Pass

5.2 Drop test

5.2.1 Class A, Feet first

Specimen 2F03301 was assessed.

a) The test mass was arrested.	Pass
b) The test mass remained suspended for 10 minutes after the drop.	Pass
c) All connectors remained connected.	Pass
d) The angle of the test mass at rest after the drop was 11°. This is less than the maximum 30° permitted.	Pass
e) The fall arrest indicator activated to give a permanent, readily visible warning.	Pass
f) The harness stretch "xh" was 7.17 inches. This is not more than the value "18 inches" stated in the manufacturer's instructions.	Pass

5.2.2 Class A, Head first

Specimen 2F03302 was assessed.

a) The test mass was arrested.	Pass
b) The test mass remained suspended for 10 minutes after the drop.	Pass
c) All connectors remained connected.	Pass
d) The fall arrest indicator activated to give a permanent, readily visible warning.	Pass

5.2.3 Classes P

Specimen 2F03303 was assessed.

a) The test mass was arrested.	Pass
b) The test mass remained suspended for 10 minutes after the drop.	Pass
c) All connectors remained connected.	Pass

5.3 Fall arrest indicator - Dynamic test

Specimen 2F03304 was assessed.

a) The fall arrest indicator activated.	Pass
b) There was a permanent readily visible warning after the test.	Pass

7.1 Marking

The markings shall appear in both English and French on a durable label intended to last the life of the product and shall be affixed to the full body harness was not assessed. NAs

Labels supplied electronically were used for assessments. The markings on the labels appeared in both English and French.

The following items were shown:

a) The identification of the manufacturer/vendor was given. "JECH"	Pass
b) The model number was given. "JE136103B"	Pass
c) The designation CSA Z259.10 was given	Pass
d) The applicable class was marked in words in accordance with the titles of clauses 4.8 to 4.12.	Pass
Applicable pictograms as per Figs 1 to 5 were given	Pass
The minimum height of the pictogram was not assessed	NAs
The word "size and grandeur" were given	Pass
e) Date of manufacture (by year and month) was given. "201804"	Pass
f) Space for personal identification was provided. "Name"	Pass

7.2 Information material

Information written in both English and French shall be provided with each full body harness offered for sale was not assessed. NAs

Information material supplied electronically in English and French were used for assessment.

The following items were shown:

a) The intended purpose of the device was given.	Pass
b) A hazard warning was given.	Pass
c) Instructions on proper method & limitations of use were given.	Pass
d) The expected stretch of the harness when arresting a fall, "xh = 18 inches" was given.	Pass
An instruction that this distance be taken into account, re: calculating clearance below a worker was given.	Pass
e) Fitting and adjusting instructions were given.	Pass
Applicable pictograms as per Figs 1 to 5 were given	Pass
f) Recommendations for care (cleaning, maintenance and storage) and inspection (including frequency) were given.	Pass
g) The purpose and function of the fall arrest indicator were given.	Pass
h) The required warning was given.	Pass
i) Application, use and connection of evacuation device to the harness was given.	Pass
j) Manufacturer's name, address and telephone number were given.	Pass

Estimates of the uncertainty of measurement

Clause	Test	Uncertainty
4.1	Fibre webbing – strap width	0.2mm
	Fibre webbing – strap loading	See Note 1
4.2	Connecting components	See Note 1
4.3	Keeper	See Note 1
4.4	Tongue type buckles	See Note 1
4.5	Fall arrest indicator	See Note 1
4.6	Protection of the genital area	See Note 1
4.7	Classification	See Note 1
4.8	Class A – Fall arrest	See Note 1
4.9	Class D – Suspension and controlled descent	See Note 1
4.10	Class E – Limited access	See Note 1
4.11	Class L – Ladder climbing	See Note 1
4.12	Class P – Work positioning	See Note 1
4.13	Alternative applications	NAs
4.14	Alternative materials & construction	NAs
5.2	Drop test – angle at rest	±0.2°
5.2	Drop test – stretch	±1.4%
5.3	Fall arrest indicator static test	See Note 1
5.3	Fall arrest indicator dynamic test	See Note 1
7.1	Markings	NAp
7.2	Information	NAp

Note 1. The acceptance criterion for this test is a straightforward "Pass/Fail", rather than a numerical value. Consequently, as there is no value to be reported, uncertainty has not been reported either.

Note 2. The uncertainty value is based on a standard uncertainty multiplied by a coverage factor k = 2, which provides for a confidence level of approximately 95%. Values expressed as a percentage (%) are relative.

Note 3. It should be noted that the above values have not been taken into account when making assessments against the pass/fail criteria.

ANNEX

This Annex comprises one section.

1. Photograph of the product tested. (1 page)

END OF REPORT

Jinhua Jech Tools Co., Ltd –
Full body harness, model JE136103B

INSPEC Testing Services' specimen 2F03301 08 March 2018