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				Approval Date: 01/08/2025
Quality Durability	Dial Fit component testing			Effective Date: 01/08/2025
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Departments Affected: Suppliers, 3 rd party labs, Development and Sourcing Teams			
Version	Date	Modifications	Page
01	27/07/2025	New creation	All
Remarks:			

1 Purpose

To determine the durability of dial fit systems for shoes by testing the functionality of opening, tightening and closing.

2 Scope

In scope are all complete assembled dial fit systems except BOA:

For BOA component, the existing practice utilizing BOA's test result for quality assurance will be followed further. Re-testing in T1 laboratories is not mandatory. Pls ensure the following points:

- BOA is responsible to upload their CoC/Testing results to the adidas Creation Portal for new DTRs.
- For mass production shipments, BOA will provide CoC/testing reports only based on T1 request. There it is T1 responsibility to upload (BOA) production test reports into Creation Portal if needed.

3 Roles & Responsibilities

User Group	Responsibilities	Section	Detail	Link
Suppliers/ 3 rd party labs	Test Execution and Evaluation	Entire file	Required Equipment; Sample Preparation	

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Quality Teams; Material Teams; Operation Teams	Ensure Standard is executed		and Conditioning; Test Execution; Data Collection, Evaluation and Reporting.	5 ff.

4 Reference Documents/Terminology

- ISO 7500-1: Static tensile machine definition
- PHM-FW0002: Testing Conditioning and Cutting

5 Specific Procedure

A – Functionality check

5.1 Equipment

Functional test has to be done by hand

5.2 Sample

- 1 exemplary sample
- 5 repetitions

5.3 Procedure

Hold in one hand the dial and use your other hand to execute the following steps:

- Open the dial by lifting the cap upwards (see figure 1)



Figure 1: dial opening by lifting the cap upwards

- Close the dial again
- Rotate the dial to turn in the laces
- Open the dial again and pull the lace out completely
- Continue from beginning to run the entire sequence 5 times in a row.

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5.4 Data Collection, Evaluation and Reporting

Evaluate the functionality of the dial system for any damage/breakage. Pass if it is still possible to smoothly open, close and turn by hand with less force after testing.

B – Reel load lift

5.5 Equipment

- Tensile machine, compliant with ISO 7500-1 standard, with the ability to install a graph writer.
- Loadcell compliant with ISO 7500-1 class 0,5
- Circular lace attachment drums (diameter >40mm)

5.6 Sample

- 1 complete assembled dial system

5.7 Procedure

- Open the dial and completely pull out the lace by hand
- If the distended lace is a loop, cut it in the middle to have roughly two equal long ends
- **Close** the dial and turn in the lace for 3 full rotations
- Clamp the circular lace attachment device into the tensile machine (distance between the origin of the two disks = 100 mm) and wind up the laces that the dial hangs in the middle of the device. Alternatively, plain metal clamps can be used instead with a clamp distance of 100 mm (see options in figure 2).

Note: Ensure there is no sharp corners/edges on tensile test clamps/lace device to avoid any damage on the lace. Ensure there is no slippage on the clamps.

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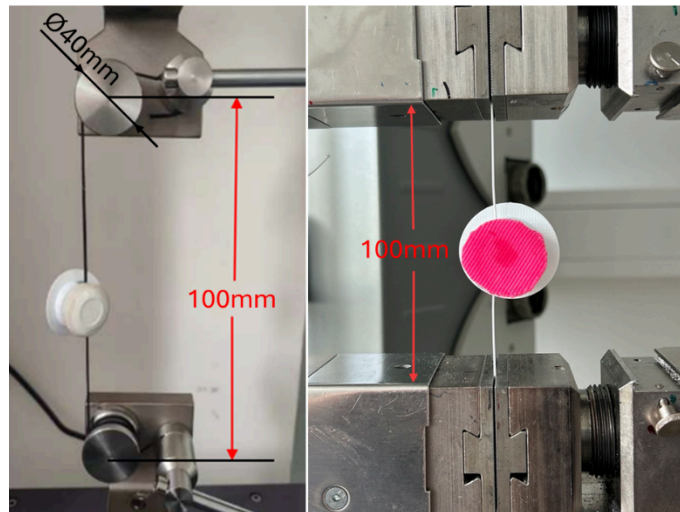


Figure 2: circular lace attachment device (left) or plain metal clamps (right)

- Set the travel speed to 100mm/min.
- Set load of tensile machine to zero (0).
- Start pulling until **200 N** is reached. In case of any damage or breakage before the requirement is reached, stop the machine.
- Remove the tested dial and execute the functionality check (shown in section A) 1 time.

5.8 Data Collection, Evaluation and Reporting

Evaluate the functionality of the dial system for any damage/breakage. Pass if it is still possible to smoothly open, close and turn by hand with less force after testing. Fail if the function is not given any more, the dial sticks or the pulling force has not been reached without damage/breakage.

C – Dial opening and breakage force

5.9 Equipment

- Tensile machine, compliant with ISO 7500-1 standard, with the ability to install a graph writer.
- Loadcell compliant with ISO 7500-1 class 0,5
- Three-arm jig which allows to pull on the dial cap

5.10 Sample

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- 1 complete assembled dial system

5.11 Procedure

- Mount or sew the dial to any kind of textile/leather (see figure 3, ensure the connection is stronger than the dial itself)



Figure 3: Dial mounted on a strap

- Clamp the dial in the lower clamp of the tensile machine and ensure that it is closed.
- Use on the upper clamp a three-armed jig that can grip the cap of the dial (see figure 4). Ensure that the cap is securely gripped from underneath without deforming the dial.

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Figure 4: Three-armed jig grips underneath the lid

- Set the travel speed to 100mm/min.
- Set load of tensile machine to zero (0).
- Start pulling until **200 N** is reached. In case of any damage or breakage before the requirement is reached, stop the machine.

5.12 Data Collection, Evaluation and Reporting

Check from the record/trace the force which is needed until the dial opens (=dial opening force). Enter this force in the testing system. In addition, evaluate if any damage/breakage happens on the dial before the required force is reached to pass the test (= dial breakage force).

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D – Knot holding force

5.13 Equipment

- Tensile machine, compliant with ISO 7500-1 standard, with the ability to install a graph writer.
- Loadcell compliant with ISO 7500-1 class 0,5
- Circular lace attachment drums (diameter >40mm)

5.14 Sample

- 1 complete assembled dial system

5.15 Procedure

- Open the dial and pull out the lace completely by hand
- If the distended lace is a loop, cut it in the middle to have roughly two equal long ends
- Like Part B, mount the circular lace attachment device to the tensile machine or use alternatively plain metal clamps (like in figure 2) and assemble the dial that it hangs in the middle of the device/clamps. Ensure that the dial is still **open** after mounting.
- Set the travel speed to 100mm/min.
- Set load of tensile machine to zero (0).
- Start pulling until **150 N** is reached. In case of any damage or breakage before the requirement is reached, stop the machine.
- Remove the tested dial and execute the functionality check (shown in section A) 1 time.

5.16 Data Collection, Evaluation and Reporting

Evaluate the functionality of the dial system for any damage/breakage. Pass if it is still possible to smoothly open, close and turn by hand with less force after testing. Fail if the function is not given any more, the dial sticks or the pulling force has not been reached without damage/breakage.


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6 Further Information

adidas does not specify particular manufacturers for adapters, fixtures, or tensile testing machines for this test method. However, it must still be ensured that all described parameters have to be followed!

	<p>In all cases, the instruction manual according to the manufacturer including calibration and maintenance must be followed to ensure safety and quality.</p>
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