



FITPRO™ ULTRA V4.11

FIT TEST SOFTWARE

CSA-Z94.4-18

FEATURE UPDATES

Contents

Overview	1
Recording Comfort Assessment and Respirator User Competency Ratings	2
Recording Respirator Comfort Score.....	2
Recording Respirator User Competency	3
Recording Post-Test Comfort Validation Answer	4
CSA Assessment Display and Reporting	5
Fit Test History Screen	5
Printed Fit Test Report.....	7
CSA Assessments in Custom Reports	8
Changes to FitPro™ Ultra Database Schema.....	8
Documentation and Scripts Included with FitPro™ Ultra v4.11 Fit Test Software	8
User Messaging for MS SQL Database Users.....	9

Overview

FitPro™ Ultra (FPU) v4.11 has been updated to record information required by the CSA-Z94.4-18 fit testing standard:

- Pre-test Respirator Comfort Assessment scores can now be recorded.
- Pre-test Respirator User Competency rating can now be recorded.
- Post-test Comfort Validation response can now be recorded.
- The recorded assessment information appears in the fit test records and can be incorporated into custom reports.
- Both passed and failed assessments and fit tests are recorded as required by the standard.



Recording Comfort Assessment and Respirator User Competency Ratings

In the FPU *Assign* screen, fields have been added to record the new CSA information “Respirator Comfort Score” and “Respirator User Competency.” Each offers a drop-down style control with appropriate CSA mandated responses available.

The screenshot shows the 'Assign' screen in the FitPro™ Ultra application. It is divided into two main sections: '1 Select Person' and '2 Respirator and Protocol'.

1 Select Person: This section contains a 'FILTER' input field and a table of people. The table has columns for Name, ID, and Actions (edit and info icons). The list shows 8 people, with IDs ranging from 1000 to 1007. At the bottom of this section are a 'REFRESH LIST' button, a pagination indicator '1 - 10 of 28', and navigation arrows.

2 Respirator and Protocol: This section contains several drop-down menus and a date field. The fields are: 'PROTOCOL' (set to 'CSA-Z94.4-18'), 'RESPIRATOR MODEL/STYLE' (set to 'Choose One'), 'RESPIRATOR SIZE' (set to 'Choose One'), 'RESPIRATOR COMFORT SCORE' (set to 'Choose One'), 'RESPIRATOR USER COMPETENCY' (set to 'Choose One'), and 'NEXT TEST DATE' (set to '04/23/2022'). At the bottom right of this section are 'CANCEL' and 'ASSIGN' buttons.

Recording Respirator Comfort Score

The *Respirator Comfort Score* lets the person being tested to rate the comfort level of their respirator. The available comfort scores are: “0: No Issues”, “1: Discomfort that can be ignored”, “2: Some discomfort but still able to function” and “3: UNACCEPTABLE discomfort – not bearable”.

The last choice, “N/A: Assessment not recorded”, gives the operator the opportunity to opt out of recording the assessment as part of the FPU workflow.

Selecting a score of 0 will allow the operator to proceed to fit testing without further prompting.

This image is a close-up of the 'RESPIRATOR COMFORT SCORE' drop-down menu. The menu is open, showing the following options: '0: No issues', 'Choose One', '0: No issues', '1: Discomfort that can be ignored' (which is highlighted in blue), '2: Some discomfort but still able to function', '3: UNACCEPTABLE discomfort - not bearable', and 'N/A: Assessment not recorded'.

Scores of 1 or 2 are not considered a failure by the CSA standard, but FPU will prompt the operator with recommendations to try and improve the score if possible.

Comfort Score Warning

A comfort score of 1 does not constitute a comfort assessment failure, however readjusting or repositioning of the respirator may improve the comfort level.

CANCEL **CONTINUE**

Comfort Score Warning

A comfort score of 2 does not constitute a comfort assessment failure. However, it is recommended to attempt a repositioning of the respirator or find an alternative.

CANCEL **CONTINUE**

If the operator chooses to **Continue**, they will proceed to the fit test screen and be able to perform a fit test. Comfort scores of 0, 1 or 2 will be recorded along with the result of a completed fit test.

If a Respirator Comfort Score of 3 is chosen, this is considered a failure and the operator will not be able to perform a fit test. In this case, they will see a prompt explaining that they can save the record of the failed comfort assessment, or cancel and attempt to improve the score

Comfort Score Warning

A comfort score of 3 is a comfort assessment failure. Select Continue to save the record, Cancel to attempt a repositioning of the respirator or find an alternative.

CANCEL **CONTINUE**

If the operator chooses to continue and record the failing comfort score of 3 to the FPU database, they will see a message confirming that the Comfort / Competency Assessment failed and that a fit test was not performed.

Fit Test Not Performed
Assessment Failed
Comfort / Competency Assessment Failed

PRINT EXIT NEXT

Exercise	Fit Factor
① NORMAL BREATHING	
② DEEP BREATHING	
③ TURN HEAD SIDE TO SIDE	
④ NOD HEAD UP AND DOWN	
⑤ TALK OUT LOUD	
⑥ BENDING OVER	
⑦ NORMAL BREATHING	

Recording Respirator User Competency

The *Respirator User Competency* assessment rates the ability of the person being tested to perform pre-use facepiece inspection, donning, doffing and user seal checks as observed by the fit test operator. This rating is also entered by the operator before a fit test is performed.

RESPIRATOR USER COMPETENCY

Yes

Choose One

No

Yes

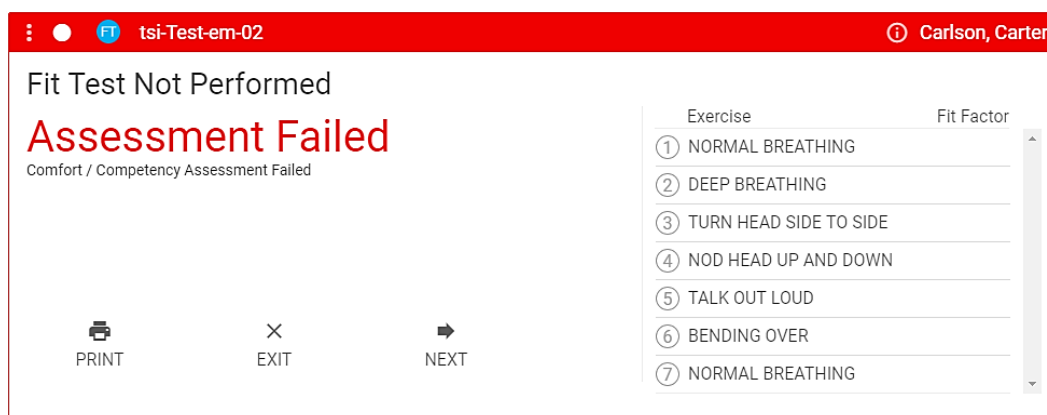
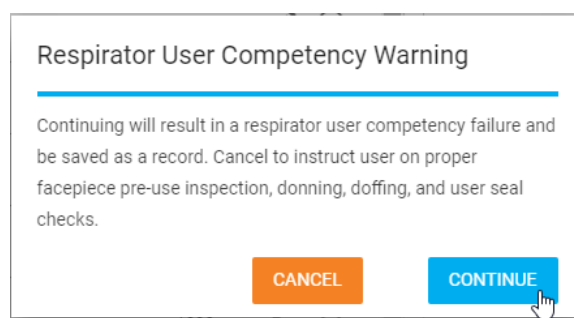
Assessment not recorded

The ratings available are “**No**”, the user is not competent, or “**Yes**”, the user is competent. The last choice, “**Assessment not recorded**” gives the operator an opportunity to opt out of recording the assessment rating as part of the FPU workflow.

Choosing “**Yes**” allows the operator to proceed to fit testing without further prompts. The “**Yes**” rating will be recorded along with the results of a completed fit test.

A rating of “**No**” means the operator has observed that the respirator user is not fully competent at fitting their mask. When a “**No**” rating is selected, the operator will be prompted whether they want to **Continue** and record the failing assessment rating, or **Cancel** and instruct the user further.

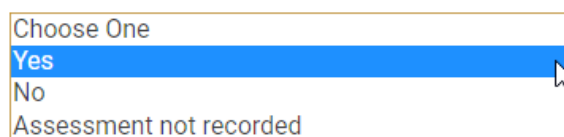
If the operator chooses to continue and record the failing competency rating of “**No**” to the FPU database, they will see a message confirming that the Comfort / Competency Assessment failed and that a fit test was not performed.



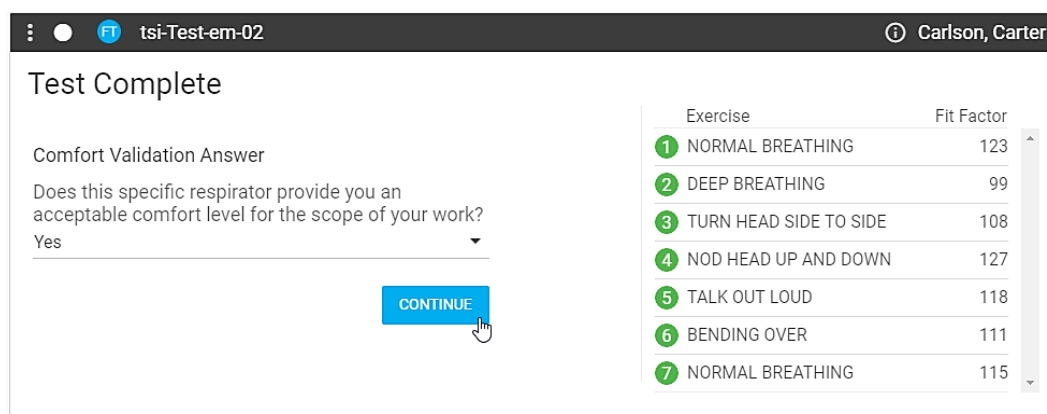
Recording Post-Test Comfort Validation Answer

FPU will prompt the operator at the end of a **PASSING** fit test reminding them to ask the required Comfort Validation question and allowing them to record the response.

The question is to be answered “**Yes**” or “**No**” by the respirator user. The last selection, “**Assessment not recorded**” allows the operator the opportunity to opt out of recording the response as part of the FPU workflow.



The operator must enter a response and click **Continue** to proceed.



The fit test result and the Comfort Validation question response will be saved and the final fit test result will be displayed. Selecting a Comfort Validation Answer of “No” will not result in the fit test being marked as failed; the result of the fit test is considered independently of a failing Comfort Validation Answer.

Test Complete

Passed

The fit test completed normally.

Overall Fit Factor

119

Pass Level

100

PRINT

RESTART

EXIT

NEXT

Exercise	Fit Factor
1 NORMAL BREATHING	121
2 DEEP BREATHING	111
3 TURN HEAD SIDE TO SIDE	111
4 NOD HEAD UP AND DOWN	131
5 TALK OUT LOUD	114
6 BENDING OVER	119
7 NORMAL BREATHING	123

CSA Assessment Display and Reporting

When the CSA-Z94.4-18 Protocol is used, the additional comfort and competency information appears in the *Fit Test History* screen, on printed Fit Test Reports and is available for custom reports in the *Reporting* screen.

Fit Test History Screen

In the Fit Test History Detail view, comfort and competency results for CSA protocol fit tests will display the assessment information. For other protocols, that information will be hidden.

Fit Test Record

PASSED

DETAILS

PROTOCOL

RESPIRATOR

LAST NAME

Carlson

FIRST NAME

Carter

TEST DATE

04/20/2021 19:52

NEXT TEST DATE

04/20/2023

ID

1002

OPERATOR

dfg

COMPANY

Fairview Hospital

LOCATION

Maplewood

RESPIRATOR

3M 8110S FFP [100] N

RESPIRATOR SIZE

Medium

COOKIES

NEW LABEL

NOTES

none

EDIT

Fit Test Results

PASS LEVEL

100

OVERALL FIT FACTOR

114

EXERCISE	FIT FACTOR
NORMAL BREATHING	123
DEEP BREATHING	99
TURN HEAD SIDE TO SIDE	108
NOD HEAD UP AND DOWN	127
TALK OUT LOUD	118
BENDING OVER	111
NORMAL BREATHING	115

COMFORT ASSESSMENT SCORE

0

RESP. USER COMPETENCY

Yes

COMFORT VALIDATION ANSWER

Yes

PRINT

DONE

If either of the pre-test assessments failed, and a fit test could not be performed, there will not be any fit test result recorded and a message indicating that a fit test was not performed will be shown.

FAILED

Fit Test Results

A fit test was not performed

COMFORT ASSESSMENT SCORE
3

RESP. USER COMPETENCY
Yes

COMFORT VALIDATION ANSWER
Not Recorded

It is possible for the pre-test assessments and fit test to pass, and still record and display a “No” response for the final Comfort Validation question.

Fit Test Record **PASSED**

DETAILS **PROTOCOL** **RESPIRATOR**

LAST NAME Earwax	FIRST NAME Edward
TEST DATE 04/20/2021 20:09	NEXT TEST DATE 04/20/2023
ID 1005	OPERATOR dfg
COMPANY Potato Inc.	LOCATION Idaho
RESPIRATOR 3M 8110S FFP [100] N	RESPIRATOR SIZE Medium/Large
COOKIES	NEW LABEL
NOTES N/A	

EDIT

Fit Test Results

PASS LEVEL
100

OVERALL FIT FACTOR
119

EXERCISE	FIT FACTOR
NORMAL BREATHING	121
DEEP BREATHING	111
TURN HEAD SIDE TO SIDE	111
NOD HEAD UP AND DOWN	131
TALK OUT LOUD	114
BENDING OVER	119
NORMAL BREATHING	123

COMFORT ASSESSMENT SCORE
0

RESP. USER COMPETENCY
Yes

COMFORT VALIDATION ANSWER
No

Printed Fit Test Report

Printed Fit Test Reports also include the assessment information.

<u>FIT TEST REPORT</u>			
04/20/2021			
ID NUMBER	1002	Cookies	
LAST NAME	Carlson	New Label	
FIRST NAME	Carter		
COMPANY	Fairview Hospital		
LOCATION	Maplewood		
TEST DATE	04/20/2021 19:52	PORTACOUNT S/N	Test-em-02
DUE DATE	04/20/2023	N95-COMPANION™	Yes
RESPIRATOR	3M 8110S FFP [100] N95	PROTOCOL	CSA-Z94.4-18
MANUFACTURER	3M	PASS LEVEL	100
MODEL	8110S	APPROVAL	84A-0007
RESPIRATOR STYLE	FFP	EFFICIENCY<99%	Yes
RESPIRATOR SIZE	Medium	RESP. USER	Yes
COMFORT	0	COMPETENCY	
ASSESSMENT SCORE			
COMFORT VALIDATION	Yes		
ANSWER			
<u>EXERCISE</u>	<u>DURATION (sec)</u>	<u>FIT FACTOR</u>	<u>PASS</u>
NORMAL BREATHING	60	123	Yes
DEEP BREATHING	60	99	Yes
TURN HEAD SIDE TO SIDE	60	108	Yes
NOD HEAD UP AND DOWN	60	127	Yes
TALK OUT LOUD	60	118	Yes
BENDING OVER	60	111	Yes
NORMAL BREATHING	60	115	Yes
OVERALL FF		114	Yes
FITTEST OPERATOR	_____	DATE	_____
	dfg		
NAME	_____	DATE	_____
	Carter Carlson		
NOTE:	none		

<u>FIT TEST REPORT</u>			
04/20/2021			
ID NUMBER	1002	Cookies	
LAST NAME	Carlson	New Label	
FIRST NAME	Carter		
COMPANY	Fairview Hospital		
LOCATION	Maplewood		
TEST DATE	04/20/2021 19:47	PORTACOUNT S/N	Test-em-02
DUE DATE	04/20/2023	N95-COMPANION™	Yes
RESPIRATOR	3M 8110S FFP [100] N95	PROTOCOL	CSA-Z94.4-18
MANUFACTURER	3M	PASS LEVEL	100
MODEL	8110S	APPROVAL	84A-0007
RESPIRATOR STYLE	FFP	EFFICIENCY<99%	Yes
RESPIRATOR SIZE	Medium	RESP. USER	Yes
COMFORT	3	COMPETENCY	
ASSESSMENT SCORE			
COMFORT VALIDATION	Not Recorded		
ANSWER			
A fit test was not performed			
FITTEST OPERATOR	_____	DATE	_____
	dfg		
NAME	_____	DATE	_____
	Carter Carlson		
NOTE:	none		

CSA Assessments in Custom Reports

The new CSA fields are also available when creating custom Fit Test reports in the *Reporting* screen of FPU.

New Report Selected records: 61

Report Data

Sort By	Columns	Filter
<input type="radio"/> ^ v	Respirator Description	ALL
<input checked="" type="radio"/> ^ v	Comfort Assessment Score	ALL
<input type="radio"/> ^ v	ID	ALL
<input type="radio"/> ^ v	N95-Companion™	ALL
<input type="radio"/> ^ v	Protocol	ALL
<input type="radio"/> ^ v	Result	ALL
<input type="radio"/> ^ v	Overall Fit Factor	ALL
<input type="radio"/> ^ v	Serial Number	ALL
<input type="radio"/> ^ v	Respirator Style	ALL
<input type="radio"/> ^ v	Respirator Size	ALL
<input type="radio"/> ^ v	Respirator Model	ALL
<input type="radio"/> ^ v	Respirator Manufacturer	ALL
<input type="radio"/> ^ v	Pass Level	ALL
<input type="radio"/> ^ v	Respirator Description	ALL
<input type="radio"/> ^ v	Operator	ALL
<input type="radio"/> ^ v	Approval	ALL
<input type="radio"/> ^ v	Notes	ALL
<input type="radio"/> ^ v	Comfort Assessment Score	ALL
<input type="radio"/> ^ v	Resp. User Competency	ALL
<input type="radio"/> ^ v	Comfort Validation Answer	ALL
<input type="radio"/> ^ v	Cookies	ALL
<input type="radio"/> ^ v	New Label	ALL
<input type="radio"/> ^ v	Hide Column	ALL

Changes to FitPro™ Ultra Database Schema

To be able to record the new CSA assessment information, some changes were needed for the FPU database schema. For the default file-based SQLite database type, these changes happen automatically without user intervention. For MS SQL Server databases, the required changes need to be performed manually by a database administrator with sufficient access permission to alter the database schema.

Documentation and Scripts Included with FitPro™ Ultra v4.11 Fit Test Software

Documentation and SQL scripts included with FPU v4.11 instruct existing MS SQL database users on how to update their database schema to the latest schema version (4), and new MS SQL users on how to get started.

User Messaging for MS SQL Database Users

All current MS SQL users that are upgrading to version 4.11 from an earlier version, will see some in-program prompts recommending that they update their database schema. The message informs the user where they can find the documentation for that update. Users can hide the message by choosing, ☐ **DO NOT SHOW THIS WARNING AGAIN**.

Database Version Update Recommended

In order to take advantage of the latest features of this version of FitPro Ultra, the MS SQL database that is currently in use should be updated. For Canadian users, the main new feature is the ability to capture the Comfort Assessment and Respirator User Competency Assessment information called out in the CSA-Z94.4-18 fit testing standard. If the database update is not performed, this information will not be stored in the database. For all MS SQL users, the length of the "Notes" field for the People and Fit Test records have been expanded from a maximum of 64 characters to a maximum of 128 characters. If neither of these features are important to your application, this message can be safely ignored and your database can be used as it is. For more information and instructions on how to update the database, see the document "MS SQL Server Support README.pdf" found in this folder: "C:\Program Files (x86)\TSI\FitPro Ultra\MS SQL Support"

CONFIRM

☐ DO NOT SHOW THIS WARNING AGAIN

If an existing MS SQL database is not upgraded and the CSA protocol is used, the options to enter the assessment information will not be available in the *Assign* screen. Those users will see messaging to remind them that updating their MS SQL database would enable these features.

Assign

1 Select Person

NEW

FILTER

Name	ID	Actions
Adams, Quincy	84536	
Doe, John	83748	
Johnson, Christine	89745	
Smith, Mary	89784	
Wilson, Sam	82314	

2 Respirator and Protocol

PROTOCOL
CSA-Z94.4-18

RESPIRATOR MODEL/STYLE
acme as200+ FFP [200] N95

RESPIRATOR SIZE
Small/Medium

It is possible to record CSA-Z94.4-18 comfort and competency assessment information if the database configuration is updated. Please refer to the document "MS SQL Server Support README.pdf" found in this folder: "C:\Program Files (x86)\TSI\FitPro Ultra\MS SQL Support"

NEXT TEST DATE
04/21/2023



UNDERSTANDING, ACCELERATED

TSI Incorporated – Visit our website www.tsi.com for more information.

USA Tel: +1 800 680 1220
UK Tel: +44 149 4 459200
France Tel: +33 1 41 19 21 99
Germany Tel: +49 241 523030

India Tel: +91 80 67877200
China Tel: +86 10 8219 7688
Singapore Tel: +65 6595 6388

P/N 6015662 Rev. A

©2021 TSI Incorporated

Printed in U.S.A.



Distributed by:

Kenelec Scientific Pty Ltd
1300 73 22 33
sales@kenelec.com.au
www.kenelec.com.au