## Overview

You can use Acrobat to make PDFs meet the common accessibility standards, such as Web Content Accessibility Guidelines (WCAG) 2.0 and PDF/UA (Universal Access, or ISO 14289). Acrobat provides the following accessibility tools:

- **Prepare for accessibility**: A predefined action automates many tasks, checks accessibility, and provides instructions for items that require manual fixes. Quickly find and fix problem areas.
- **Accessibility check**: It verifies whether the document conforms to accessibility standards, such as PDF/UA and WCAG 2.0.
- **Accessibility report**: It summarizes the findings of the accessibility check. It contains links to tools and documentation that assist in fixing problems.
- **Reading options**: It includes settings for the available reading options.
- Reading order: You can use the <u>Reading Order tool</u> to examine the structure, reading order, and contents of a PDF.
- **Save as accessible text**: It allows you to read the saved text file in a word-processing application. It also enables you to emulate the end-user experience of readers who use a braille printer to read the document.

# **Check accessibility of PDFs (Acrobat Pro)**

You can use the *Prepare for accessibility* tool to check and make a PDF accessible. It prompts you to address accessibility issues, such as a missing document description or title. It looks for common elements that need further action, such as scanned text, form fields, tables, and images. You can run a *Prepare for accessibility* action on all PDFs except dynamic forms (XFA documents) or portfolios.

- 1. Open the PDF and then from the All tools menu on the left, select **View more** and then select **Prepare for accessibility**.
  - Or, from the top menu, select **See all tools**. Then, scroll down to **Prepare > Prepare for accessibility** and select **Open**.
  - It displays the Prepare for accessibility page with a list of available actions displayed on the left panel.
- 2. From the left panel, select **Accessibility check**.
  - The right-hand pane changes to display each task included in the Make Accessible action, as well as the instructions to execute the action.
- 3. From the *Accessibility Checker Options* dialog, select the options as required and then select **Start Checking**.

4. Once the check is complete, it displays a panel on the right that lists the accessibility issues. Select each issue type drop-down to view the details and make fixes, as suggested.

Since the Accessibility Check feature does not distinguish between essential and nonessential content types, some reported issues may not affect readability. We suggest that you review all issues to determine the ones that need correction.

The report displays one of the following statuses for each rule check:

- **Passed**: The item is accessible.
- **Skipped By User**: Rule was not checked because it wasn't selected in the Accessibility Checker Options dialog box.
- **Needs Manual Check**: The Full Check/Accessibility Check feature couldn't check the item automatically. Verify the item manually.
- **Failed**: The item didn't pass the accessibility check.
- 5. To view a complete report of the check, from the left panel, select **Accessibility report**.

It displays a detailed report in the right panel.

# Fix accessibility issues (Acrobat Pro)

To fix a failed check after running the *Prepare for accessibility* check, right-click (Windows) or Ctrl-click (Mac OS) the item in the **Accessibility Checker** panel and select one of the following options from the context menu:

- **Fix**: Acrobat either fixes the item automatically or displays a dialog box prompting you to fix the item manually.
- **Skip Rule**: Deselects this option in the Accessibility Checker Options dialog box for future checks of this document, and change the item status to Skipped.
- **Explain**: Opens the online Help where you can get more details about the accessibility issue.
- **Check Again**: Runs the checker again on all items. Choose this option after modifying one or more items.
- **Show Report**: Displays a report with links to tips on how to repair failed checks.
- **Options**: Opens the Accessibility Checker Options dialog box, so you can select which checks are performed.

# **Accessibility issues**

# **Document**

PREVENT SECURITY SETTINGS FROM INTERFERING WITH SCREEN READERS

A document author can specify that no part of an accessible PDF is to be copied, printed, extracted, commented on, or edited. This setting could interfere with a screen reader's ability to read the document because screen readers must be able to copy or extract the document's text to convert it to speech.

This flag reports whether it's necessary to turn on the security settings that allow accessibility.

To fix the rule automatically, go to **All tools > Prepare for accessibility > Accessibility check** and then ensure that the **Accessibility permission flat is set** checkbox is selected before running the check. Then, from the Accessibility Checker report, right-click the **Accessibility permission flag** and select **Fix**.

To manually fix the accessibility permissions:

- 2. In the Document properties dialog:
  - 1. Select the **Security** tab.
  - 2. From the Security Method drop-down, select **No Security**.
  - Select OK.

If your assistive technology product is registered with Adobe as a Trusted Agent, you can read PDFs that might be inaccessible to another assistive technology product. Acrobat recognizes when a screen reader or other product is a Trusted Agent and overrides security settings that would typically limit access to the content for accessibility purposes. However, the security settings remain in effect for all other purposes, such as to prevent printing, copying, extracting, commenting, or editing text.

#### Note:

See the related WCAG section: 1.1.1 Non-text Content. (A), 4.1.2 Name, role, value

#### **IMAGE-ONLY PDF**

Reports whether the document contains non-text content that is not accessible. If the document appears to contain text, but doesn't contain fonts, it could be an image-only PDF file.

To fix the rule automatically, go to **All tools > Prepare for accessibility > Accessibility check** and then ensure that the **Document is not-image only PDF** checkbox is deselected before running the check.

To fix this rule check manually, use **OCR** to recognize text in scanned images:

1. From the **All tools** menu, select **Scan & OCR**.

- 2. From the Scan & OCR panel, under *Recognize Text*, select **In this file**.
- 3. From the Pages dialog, select the pages you want to process, the document language, and then select **Recognize text**.

See the related <u>WCAG</u> section: 1.1.1. Non-text content (A)

## **TAGGED PDF**

If this rule check fails, the document isn't tagged to specify the correct reading order.

To fix the item automatically, go to **All tools** > **Prepare for accessibility** > **Accessibility check** and then ensure that the **Document is tagged PDF** checkbox is selected before running the check. Acrobat automatically adds tags to the PDF.

To specify tags manually, do one of the following:

- Enable tagging in the source application and re-create the PDF.
- Select All tools > Prepare for accessibility > Autotag document. The Add Tags
  Report appears in the navigation pane if there are any issues. The report lists potential
  problems by page, provides a navigational link to each problem, and provides
  suggestions for fixing them.
- Select **All tools** > **Prepare for Accessibility** > **Reading order** and create the tags tree. For more information, see <u>Reading Order</u>.
- Open the Tags panel and create the tags tree manually. To display the Tags panel, select the hamburger menu ≡ (Windows) > View or select the View menu (macOS), and then select Show/Hide > Side panels > Accessibility tags. For more information, see the Edit document structure with the Content and Tags panel.

#### Note:

See the related <u>WCAG</u> section: 1.3.1 Info and Relationships, 1.3.2, 2.4.1, 2.4.4, 2.4.5, 2.4.6, 3.1.2, 3.3.2, 4.1.2 Name, role, value

## LOGICAL READING ORDER

Verify this rule check manually. Make sure that the reading order displayed in the Tags panel coincides with the logical reading order of the document.

#### **DOCUMENT LANGUAGE**

Setting the document language in a PDF enables some screen readers to switch to the appropriate language. This check determines whether the primary text language for the PDF is specified. If the check fails, set the language.

To set the language automatically, select **Primary Language** in the **Accessibility Checker** tab and then choose **Fix** from the **Options** menu. Choose a language in the **Set Reading Language** dialog box, and then select **OK**.

To set the language manually, do one of the following:

- Set the language for all text in a subtree of the tags tree. Open the Tags panel. Expand the Tags root and select an element. Then choose Properties from the Options menu. Choose a language from the Language drop-down list. (To display the Tags panel, select the hamburger menu (Windows) > View or select the View menu (macOS), and then select Show/Hide > Side panels > Accessibility tags.)
- Set the language for a block of text by selecting the text element or container element in the **Content** panel. Then, right-click (Windows) or Ctrl-click (macOS) the text, choose Properties from the context menu, and choose a language from the Language drop-down list. (To display the **Content** panel, select the hamburger menu (Windows) > **View** or select the **View** menu (macOS), and then select **Show/Hide** > **Side panels** > **Content**.)

#### Note:

See the related WCAG section: Language of Page (Level A)

## TITLE

Reports whether there is a title in the Acrobat application title bar.

To fix the title automatically, select **Title** in the **Accessibility Checker** tab, and choose Fix from the **Options** menu. Enter the document title in the **Description** dialog box (deselect **Leave As Is**, if necessary).

To fix the title manually:

- 2. In the dialog that opens, under **Description**, enter a title in the **Title** text box.
- 3. Select Initial View and then from the **Show** drop-down, select **Document Title**.
- 4. Select OK.

See the related WCAG section: 2.4 Page Titled (Level A)

## **BOOKMARKS**

This check fails when the document has 21 or more pages, but doesn't have bookmarks that parallel the document structure.

To add bookmarks to the document, select **Bookmarks** on the **Accessibility Checker** panel, and choose **Fix** from the **Options** menu. In the **Structure Elements** dialog box, select the elements that you want to use as bookmarks, and click **OK**. (You can also access the **Structure Elements** dialog box by clicking the **Options** menu on the **Bookmark** tab and selecting the New Bookmarks From Structure command.)

#### Note:

See the related WCAG sections: 2.4.1 Bypass Blocks (Level A), 2.4.5 Multiple Ways (Level AA)

## **COLOR CONTRAST**

When this check fails, it's possible that the document contains content that isn't accessible to people who are color-blind.

To fix this issue, make sure that the document's content adheres to the guidelines outlined in <u>WCAG</u> section 1.4.3. Or, include a recommendation that the PDF viewer use high-contrast colors:

- 2. In the dialog that opens, from the left panel, select **Accessibility**.
- 3. Select **Replace Document Colors** and then select **Use High-Contrast Colors**. From the High-contrast color combination, choose the color combination that you want and then select **OK**.

# Page content TAGGED CONTENT

This check reports whether all content in the document is tagged. Make sure that all content in the document is either included in the **Tags** tree, or marked as an artifact.

Do one of the following to fix this rule check:

• Open the **Content** panel and right-click (Windows) or Ctrl-click (macOS) the content that you want to mark as an artifact. Then, select **Create Artifact** from the context menu. (To display the **Content** tab, select the hamburger menu (Windows)

- > View or select the View menu (macOS), and then select Show/Hide > Side panels > Content.)
- Tag the content by choosing **All tools** > **Prepare for accessibility** > **Reading order**. Select the content, and then apply tags as necessary.

See the related <u>WCAG</u> sections: 1.1.1 Non-text content (A), 1.3.1 Info and Relationships (Level A), 1.3.2 Meaningful Sequence (Level A), 2.4.4 Link Purpose (In Context) (Level A), 3.1.2 Language of Parts (Level AA), 4.1.2 Name, role, value

## **TAGGED ANNOTATIONS**

This rule checks whether all annotations are tagged. Make sure that annotations such as comments and editorial marks (such as insert and highlight) are either included in the **Tags** tree or marked as artifacts.

- Open the **Content** □ panel , and right-click (Windows) or Ctrl-click (Mac OS) the content that you want to mark as an artifact. Then, select **Create Artifact** from the context menu. (To display the **Content** panel, choose select the hamburger menu ≡ (Windows) > **View** or select the **View** menu (macOS), and then select **Show/Hide** > **Side Panels** > **Content**).
- To tag the content, select **All tools** > **Prepare for accessibility** > **Reading order**. Then select the content and apply the tags as necessary.
- - > Side Panels > Accessibility tags).

To have Acrobat assign tags automatically to annotations as they're created, choose **Autotag document** from the **Options** (...) menu on the **Tags** panel.

#### Note:

See the related WCAG section: 1.3.1 Info and Relationships (Level A), 4.1.2 Name, role, value

#### **TAB ORDER**

Because tabs are often used to navigate a PDF, it's necessary that the tab order parallels the document structure.

To fix the tab order automatically, select **Tab Order** on the **Accessibility Checker** panel, and choose **Fix** from the **Options** menu.

To manually fix the tab order for links, form fields, comments, and other annotations:

- 1. Click the **Page Thumbnails** panel on the navigation pane.
- 2. Click a page thumbnail, and then choose **Page Properties** from the **Options** menu.
- 3. In the **Page Properties** dialog box, choose **Tab Order**. Then, select **Use Document Structure**, and select **OK**.
- 4. Repeat these steps for all thumbnails in the document.

#### Note:

See the related WCAG section: 2.4.3, Focus Order (Level A)

## **CHARACTER ENCODING**

Specifying the encoding helps PDF viewers' present users with readable text. However, some character-encoding issues aren't repairable within Acrobat.

To ensure proper encoding, do the following:

- Verify that the necessary fonts are installed on your system.
- Use a different font (preferably OpenType) in the original document, and then recreate the PDF.
- Re-create the PDF file with a newer version of Acrobat Distiller.
- Use the latest Adobe Postscript driver to create the PostScript file, and then re-create the PDF.

#### Note:

The WCAG doesn't address Unicode character mapping.

## **TAGGED MULTIMEDIA**

This rule checks whether all multimedia objects are tagged. Ensure that content is included in the **Tags** tree or marked as an artifact.

Open the **Content** panel and right-click (Windows) or Ctrl-click (Mac OS) the content that you want to mark as an artifact. Then, select **Create Artifact** from the context menu. (To display the **Content** panel, select the hamburger menu (Windows) > **View** or select the **View** menu (macOS), and then select **Show/Hide** > **Side Panels** > **Content**.)

Tag the content by choosing **All tools** > **Prepare for accessibility** > **Reading order**. Select the content, and then apply tags as necessary.

Assign tags using the **Tags** panel. Right-click (Windows) or Ctrl-click (Mac OS) the element in the **Tags** tree, and choose **Create Tag From Selection**. (To display the **Tags** panel, select the hamburger menu (Windows) > **View** or select the **View** menu (macOS), and then select **Show/Hide** > **Side Panels** > **Accessibility tags**.)

#### Note:

See the related <u>WCAG</u> sections: 1.1.1 Non-text Content. (A), 1.2.1 Audio- only and Video- only (Prerecorded). (A), 1.2.2 Captions (Prerecorded). (A), 1.2.3 Audio Description or Media Alternative (Prerecorded). (A), 1.2.5 Audio Description (Prerecorded). (AA)

## **SCREEN FLICKER**

Elements that make the screen flicker, such as animations and scripts, can cause seizures in individuals who have photosensitive epilepsy. These elements can also be difficult to see when the screen is magnified.

If the **Screen Flicker** rule fails, manually remove or modify the script or content that causes screen flicker.

#### Note:

See these related <u>WCAG</u> sections: 1.1.1 Non-text Content. (A), 1.2.1 Audio- only and Video-only (Prerecorded). (A), 1.2.2 Captions (Prerecorded). (A), 1.2.3 Audio Description or Media Alternative (Prerecorded). (A), 2.3.1 Three Flashes or Below Threshold. (Level A)

## **SCRIPTS**

Content cannot be script-dependent unless both content and functionality are accessible to assistive technologies. Make sure that scripting doesn't interfere with keyboard navigation or prevent the use of any input device.

Check the scripts manually. Remove or modify any script or content that compromises accessibility.

#### Note:

See these related <u>WCAG</u> sections: 1.1.1 Non-text Content. (A), 2.2.2 Pause, Stop, Hide. (Level A), 4.1.2 Name, role, value

## **TIMED RESPONSES**

This rule check applies to documents that contain forms with JavaScript. If the rule check fails, make sure that the page does not require timed responses. Edit or remove scripts that impose timely user response so that users have enough time to read and use the content.

## Note:

See the related WCAG section: 2.2.1 Timing Adjustable. (Level A)

## **ACCESSIBLE LINKS**

For URLs to be accessible to screen readers, they must be active links that are correctly tagged in the PDF. (The best way to create accessible links is with the **Create Link** command, which adds all three links that screen readers require to recognize a link.) Make sure that navigation links are not repetitive and that there is a way for users to skip over repetitive links.

If this rule check fails, check navigation links manually and verify that the content does not have too many identical links. Also, provide a way for users to skip over items that appear multiple times. For example, if the same links appear on each page of the document, also include a "Skip navigation" link.

#### Note:

See the related WCAG section: 2.4.1 Bypass Blocks. (Level A)

## **Forms**

## **TAGGED FORM FIELDS**

In an accessible PDF, all form fields are tagged and are a part of the document structure. In addition, you can use the tool tip form filed property to provide the user with information or to provide instructions.

To tag form fields, choose **All tools > Prepare for accessibility > Autotag document**.

#### Note:

See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2 Name, role, value

#### FIELD DESCRIPTIONS

For accessibility, all form fields need a text description (tool tip).

To add a text description to a form field:

- 1. Select one of the **Form** tools, and then right-click (Windows) or Ctrl-click (Mac OS) the form field.
- 2. Choose **Properties** from the context menu.
- 3. Click the **General** properties tab.
- 4. Enter a description of the form field in the **Tooltip** field.

#### Note:

See the related <u>WCAG</u> sections: 1.3.1 Info and Relationships. (Level A), 3.3.2 Labels or Instructions (Level A), 4.1.2 Name, role, value

# Alternate text

## FIGURES ALTERNATE TEXT

Make sure that images in the document either have alternate text or are marked as artifacts. If this rule check fails, do one of the following:

- Select Figures Alternate Text in the Accessibility Checker panel, and choose Fix from the Options menu. Add alternate text as prompted in the Set Alternate Text dialog box.
- Use the **Tags** panel to <u>add alternate text for images</u> in the PDF.
- Open the Content panel and right-click (Windows) or Ctrl-click (Mac OS) the content that you want to mark as an artifact. Then, select Create Artifact from the context menu. (To display the Content panel, select the hamburger menu (Windows) > View or select the View menu (macOS), and then select Show/Hide > Side Panels > Content.)

#### Note:

See the related WCAG section: 1.1.1 Non-text Content. (A)

## **NESTED ALTERNATE TEXT**

Screen readers don't read the alternate text for nested elements. Therefore, don't apply alternate text to nested elements.

To remove alternate text from nested elements, do the following:

- 2. Right-click (Windows) or Ctrl-click (Mac OS) a nested element in the **Accessibility** tags panel and choose **Properties** from the context menu.
- 3. Remove the Alternate Text and the text to which it's applied from the Object Properties dialog box, then select **Close**.

#### Note:

See the related WCAG section: #1.1.1 Non-text Content. (A)

## **ASSOCIATED WITH CONTENT**

Make sure that alternate text is always an alternate representation of content on the page. If an element has alternate text but does not contain any page content, there is no way to determine which page it is on. If the **Screen Reader Option** in the **Reading** preferences is not set to read the entire document, then screen readers never read the alternate text.

1. Right-click (Windows) or Ctrl-click (Mac OS) an item to check.

- 3. Remove the **Alternate Text** from the **Tags** panel for any nested item that has no page content.

See the related <u>WCAG</u> section: 1.1.1 Non-text Content. (A)

## **HIDES ANNOTATION**

Alternate text can't hide an annotation. If an annotation is nested under a parent element with alternate text, then screen readers don't see it.

To remove alternate text from nested elements:

- 1. Select the hamburger menu ≡ (Windows) > View or select the View menu (macOS), and then select Show/Hide > Side Panels > Accessibility tags.
- 2. Right-click (Windows) or Ctrl-click (Mac OS) a nested element in the **Tags** panel and choose **Properties** from the context menu.
- 3. Remove the alternate text from the **Object Properties** dialog box and select **OK**.

#### Note:

See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2 Name, role, value

## OTHER ELEMENTS ALTERNATE TEXT

This report checks for content other than figures that require alternate text (such as multimedia, annotation, or 3D model). Make sure that alternate text is always an alternate representation of content on the page. If an element has alternate text but does not contain any page content, there is no way to determine which page it is on. If the **Screen Reader Options** in the **Reading** preferences is not set to read the entire document, then screen readers don't read the alternate text.

- 2. Right-click (Windows) or Ctrl-click (Mac OS) a nested element in the **Accessibility** tags panel and choose **Properties** from the context menu.
- 3. Remove the alternate text from the **Object Properties** dialog box and select **OK**.

#### Note:

See the related WCAG section: 1.1.1 Non-text Content. (A)

# **Tables**

Because table structure can be complex, it is best practice to check them for accessibility manually.

## **ROWS**

This rule checks whether each **TR** in a table is a child of **Table**, **THead**, **TBody**, or **TFoot**.

See Correct table tags with the Tags panel.

#### Note:

Related WCAG section: 1.3.1 Info and Relationships. (Level A)

## TH AND TD

In a proper table structure, **TH** and **TD** are children of **TR**.

See Correct table tags with the Tags panel.

#### Note:

See related WCAG section: #1.3.1 Info and Relationships. (Level A)

#### **HEADERS**

For accessibility, it's necessary that all tables in the PDF have a header.

See Correct table tags with the Tags panel.

#### Note:

See the related WCAG section: 1.3.1 Info and Relationships. (Level A)

#### REGULARITY

To be accessible, tables must contain the same number of columns in each row, and rows in each column.

See Correct table tags with the Tags panel.

#### Note:

See the related <u>WCAG</u> section: 1.3.1 Info and Relationships. (Level A)

## **SUMMARY**

Table summaries are optional, but can improve accessibility.

- 1. Select All tools > Prepare for accessibility > Reading order.
- 2. Select the table by drawing a rectangle around it.
- 3. In the **Reading order** dialog box, select **Table**.
- 4. Right-click (Windows) or Ctrl-click (Mac OS) Table.

- 5. Click Edit Table Summary.
- 6. Enter a summary and select **OK**.

See the related WCAG section: 1.3.1 Info and Relationships. (Level A)

## Lists

## **LIST ITEMS**

The check reports whether each List Item (LI) is a child of List (L). When this rule check fails, the structure of this list is incorrect. Lists must have the following structure: A **List** element must contain **List Item Elements**. And, **List Item Elements** can only contain **Label Elements** and **List Item Body Elements**.

To fix the list structure:

- Find the list in the Accessibility Checker panel by right-clicking (Windows) or Ctrlclicking (Mac OS) the failed element and choosing Show In Tags Panel.
- 2. Create elements, change the types of elements, or rearrange existing elements by dragging them.

#### Note:

See the related WCAG section: 1.3.1 Info and Relationships. (Level A)

## LBL AND LBODY

**Lists** must have the following structure: A **List** element must contain **List Item Elements**. And, **List Item Elements** can only contain **Label Elements** and **List Item Body Elements**. When this rule check fails, the structure of this list is incorrect.

To fix the list structure:

- 1. Find the list in the **Accessibility Checker** panel by right-clicking (Windows) or Ctrlclicking (Mac OS) the failed element and choosing **Show In Tags Panel**.
- 2. Create elements, change the types of elements, or rearrange existing elements by dragging them.

#### Note:

See the related WCAG section: 1.3.1 Info and Relationships. (Level A)

# **Headings**

## APPROPRIATE NESTING

This rule checks nested headings. When this check fails, headings are not nested properly.

To fix the list structure:

- 1. Find the list in the **Accessibility Checker** panel by right-clicking (Windows) or Ctrlclicking (macOS) the failed element and choosing **Show in Tags** Panel.
- 2. Create elements, change the types of elements, or rearrange existing elements by dragging them.

See the related <u>WCAG</u> section: 2.4.6 Headings and Labels. (Level AA). The order of headings is not required under WCAG, and is only an advisory technique.