AUTODESK FUSION 360

2026

BLOG

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Learning Tutorials

A Note to Our Readers

2026

This blog has been created using a combination of artificial intelligence tools and human review to help deliver clear, structured, and up-to-date learning content.

All technical topics, examples, and workflows are curated to support learning and skill development. While every effort is made to ensure accuracy and clarity, readers are encouraged to validate concepts through hands-on practice and documentation. Our goal is to make learning more accessible, efficient, and practical for everyone.

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— CADIN360 Team

HOW TO STOP BODIES FROM MERGING IN FUSION 360

• LEARN • • APPLY • • GROW •

Introduction

One common challenge users face in Fusion 360 is bodies merging unintentionally during their modeling process. This issue can disrupt workflows, create unwanted geometry, and complicate further edits. **How to stop bodies from merging in Fusion 360** is a fundamental skill for precise modeling, especially when working with complex assemblies or multiple components. In this comprehensive guide, we'll explore practical methods, step-by-step instructions, and best practices to prevent bodies from merging, ensuring your designs stay organized and editable. Whether you're a beginner or an experienced user, mastering this technique helps deliver cleaner, more professional CAD models.

Understanding When Bodies Merge in Fusion 360

Before diving into solutions, it's essential to understand why bodies merge in Fusion 360. Generally, merging occurs during specific operations like extrudes, joins, or assembly placements. Fusion 360 often combines bodies automatically when:

- Using boolean operations like "Join" in extrude, loft, or cut commands.
- Moving or assembling components with "Join" or "Rigid Group" constraints.
- Merging components during "Combine" or "Merge" steps.

Knowing the root cause helps determine which method to employ for preventing unwanted merging.

How to Stop Bodies from Merging in Fusion 360: Step-by-Step Guide

1. Use the "New Body" Option While Creating or Modifying Geometry

The simplest way to prevent bodies from merging during modeling is to explicitly specify that new geometry remains separate.

- **Create a new body** during extrude, revolve, or other features by selecting the "New Body" option, rather than "Join" or "Cut."
- **Steps:**
- Select your sketch or profile.
- Initiate an extrude, revolve, or similar operation.
- In the dialog box, under "Operation," choose **"New Body"**.
- Confirm the operation.

Tip: Always verify the operation before completing; "New Body" ensures separation regardless of proximity.

2. Use the "Split Body" Tool to Keep Bodies Separate

Sometimes, you develop a model that initially causes merging but need to split combined bodies later.

- **Steps:**
- Go to the **"Solid"** tab.
- Select **"Split Body."**
- Pick the body to split.
- Use a splitting tool, such as a plane, face, or sketch.
- Approve; this divides a body into separate entities.

This method is effective for post-merge corrections, allowing you to isolate parts for independent editing.

3. Maintain Bodies as Separate Components in an Assembly

Fusion 360 distinguishes between bodies and components. To prevent bodies from merging:

- **Create multiple components** rather than working in a single body.
- **Steps:**

- During initial design, select "Create" → "Component."
- Build each part as a separate component.
- Assemble components using joints or constraints.

Advantage: Bodies within a component can be manipulated independently, avoiding unintended fusion during assembly.

4. Utilize the "Combine" Tool with Proper Operation Settings

Fusion 360's **"Combine"** feature can merge bodies, but proper use prevents unwanted merging.

- **Steps:**
- Select **"Modify"** → **"Combine"**.
- Choose the target body and one or more tool bodies.
- For the operation, select **"Cut"** or **"Intersect"** instead of "Join."
- Ensure **"Keep Tools"** is checked if you want to retain source bodies.

Using **"Cut"** or **"Intersect"** avoids merging entire bodies, maintaining separate geometry.

5. Disable Automatic Body Merging via Preferences

Fusion 360 has a setting that controls whether bodies merge during certain operations.

- **Steps:**
- Go to **"Preferences"** (click your user profile icon).
- Navigate to **"Design"** or **"Design Workspace"**.
- Look for options related to body merging or operation behaviors.
- Disable auto-merge options if available.

Note: This feature may vary depending on Fusion 360 updates; always keep your software current.

Practical Examples Demonstrating How to Prevent Merging

Example 1: Creating Multiple Parts in One Design

Suppose you're designing a mechanical assembly with multiple parts needing precise separation.

- Create each part as a separate component.
- Use "New Body" during extrude operations to keep parts independent.
- Avoid using "Join" in extrusions.
- Assemble components later, ensuring bodies stay separate.

Example 2: Modeling with Complex Intersecting Geometry

When working with intersecting shapes where you want to keep bodies distinct:

- Use the "Split Body" tool along internal planes to partition large bodies.
- After splitting, manage each body independently.
- Use "Move" or "Copy" operations without merging commands.

Example 3: Using the "Combine" Tool Carefully

When performing boolean operations:

- Always choose "Cut" or "Intersect" instead of "Join" if separation is desired.
- Check the "Keep Tools" checkbox to retain original bodies as separate entities.

Common Mistakes to Avoid

- **Using "Join" Operation When You Need Separation:** This automatically merges bodies.

- **Not Specifying "New Body" During Extrudes:** Defaults can lead to merging if not chosen.
- **Forgetting to Convert Bodies into Components:** Bodies in one component tend to merge when moved.
- **Merging in Assembly Level:** Combining parts without maintaining separation can cause unintended fusion.

Pro Tips and Best Practices

- **Plan your modeling workflow**: decide early whether parts should be separate bodies or components.
- **Consistent naming**: Name bodies and components clearly to avoid confusion.
- **Regularly check the browser panel**: verify that bodies remain separate.
- **Use components extensively**: they naturally prevent unintended merging during assembly.
- **Leverage right-click context menus**: for quick access to "Split Body" or "Assign as New Component."

Comparing Bodies and Components in Fusion 360

Feature	Bodies	Components

Definition	Individual geometry in a design	Modular parts that can be assembled
Merging Behavior	Can merge during certain operations	Stay separate unless explicitly combined
Best for	Detailed geometry or edits within a file	Assembly and complex multi-part models

Summary: Using components is inherently better for preventing unintentional merging during assembly processes.

Conclusion

Mastering how to stop bodies from merging in Fusion 360 is crucial for maintaining organized, editable CAD models. By wisely choosing "New Body," utilizing the "Split Body" tool, working with separate components, and carefully managing boolean operations, you can prevent unintended fusion of geometries. These techniques streamline your workflow, reduce errors, and enhance the

precision of your designs. Practice these steps consistently to become proficient in managing complex models without the hassle of merged bodies.

FAQ

1. How do I prevent bodies from merging during a boolean operation in Fusion 360?

Ans : Choose the "Cut" or "Intersect" option instead of "Join" in the Combine tool to prevent merging.

2. Can I keep bodies separate when moving parts in an assembly?

Ans : Yes, by creating each part as a separate component, bodies will not merge during movement.

3. What is the best way to split a merged body into multiple bodies?

Ans : Use the "Split Body" tool along planes or sketches to divide a body into multiple parts.

4. How do I ensure a new feature creates a separate body in Fusion 360?

Ans : Select the "New Body" option in the extrude, revolve, or similar operation dialogs before confirming.

5. Is it possible to automatically prevent body merging in Fusion 360 preferences?

Ans : Fusion 360 does not have a specific preference to prevent merging; it relies on user operation choices and component management.

6. Why do bodies merge when I move or assemble parts, and how can I stop this?

Ans : Bodies merge during assembly if they are part of the same component or combined; using separate components prevents merging during movement.

7. What's the difference between "Bodies" and "Components" in Fusion 360?

Ans : Bodies are individual geometries within a component; components are larger, modular parts that can be assembled without merging bodies.

About CADIN360

2026

CADIN360 Learning Tutorials is an educational platform focused on practical CAD, CAM, and CAE learning.

The platform provides clear, industry-oriented tutorials, design workflows, and real-world insights using tools such as Autodesk Fusion 360.

CADIN360 is created to help learners, students, and professionals build strong fundamentals and practical design skills in modern CAD workflows.

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Practice What You've Learned

2026

You've just completed this blog and learned important concepts in Autodesk Fusion 360.

To help you practice and apply what you've learned, the next pages include a sample from our Fusion 360 book .This sample contains practice exercises and real-world practice tasks designed to strengthen your skills.

What you'll find next:

- ✓ Practice exercises from the book
- ✓ A brief overview of the complete book
- ✓ Options to explore or request the full sample

Your hands-on Fusion 360 practice starts next.

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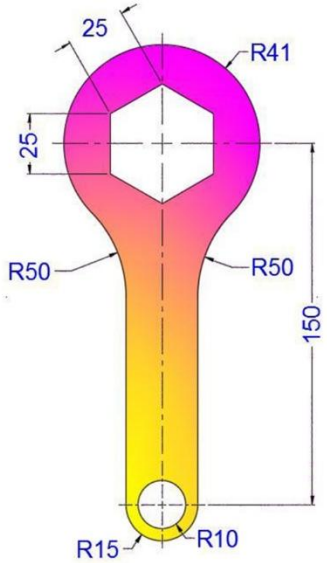
- 3D Modeling
- Assembly



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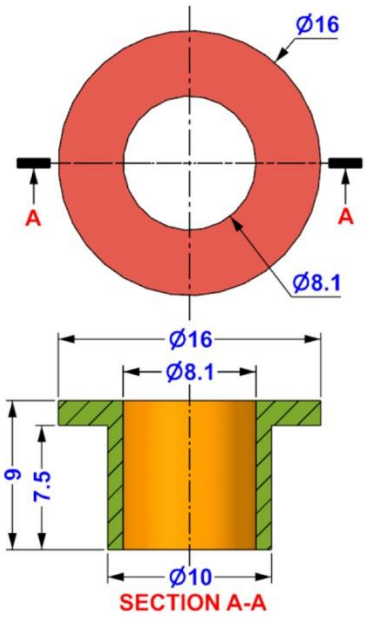

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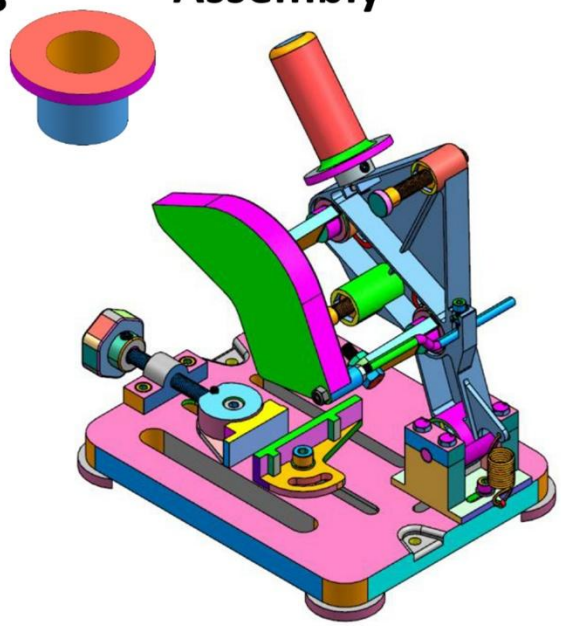

Assembly

SACHIDANAND JHA

AUTODESK

FUSION 360 ALL IN ONE WORKBOOK

500+ PRACTICE EXERCISES

2D Sketching • 3D Modeling • Assembly Drawings

SACHIDANAND JHA

Dear Reader,

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This book contains over 500 carefully crafted practice drawings, including:

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Comprehensive Assembly Models with 150+ Individual Part Drawings

We founded CADIN360 in 2016 with the goal of delivering practical, high-quality learning material for CAD software. More than 9 years later, we're still committed to producing consistently exceptional books. With each of our titles, we're working hard to set a new standard for the industry. From the paper we print on, to the authors we work with, our goal is to bring you the best books available.

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Best regards,

Sachidanand Jha
Founder & CEO, CADIN360

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AUTODESK FUSION 360 ALL IN ONE WORKBOOK

- This book contains over 500 CAD practice exercises, organized as:

  1. 200 2D Sketching Exercises
  2. 200 3D Modeling Exercises
  3. Assembly Projects with 150+ Part Drawings

- This book is a practice workbook. It does not include step-by-step tutorials for creating 2D drawing, 3D models and Assembly.

- SI units (millimeters) are used for all dimensions.

- Third Angle Projection is used throughout this book.

- This book is for **AUTODESK FUSION 360** and also suitable for Other Feature-Based Modeling Software such as Inventor, Catia, SolidWorks, NX, Solid Edge, AutoCAD, PTC Creo etc.

- Designed for students, engineers, drafters, and designers looking for extensive CAD practice using Autodesk Fusion 360.

- The exercises cover a wide range of real-world modeling challenges—from simple sketches to complex assemblies—offering clear, concise, and structured drawing practice.

- Exercises are organized to gradually develop beginner to advanced-level design skills.

- Each exercise is self-contained, and can be completed independently.

- Assembly drawings follow industry standards to help improve visualization and multi-part modeling skills.

- All dimensions are in mm. Assume missing dimensions logically.

HOW TO USE THIS BOOK

This book contains over 500 CAD practice exercises, designed for self-paced learning using Autodesk Fusion 360 or any feature-based modeling software.

- 2D Sketching Exercises: Start here if you're a beginner or learning how to use the sketch environment.

- 3D Modeling Exercises: Follow after mastering sketching. Practice creating solid models using the provided dimensions.

- Assembly Drawings: Use after completing part models to understand multi-part assemblies, relationships, and constraints.

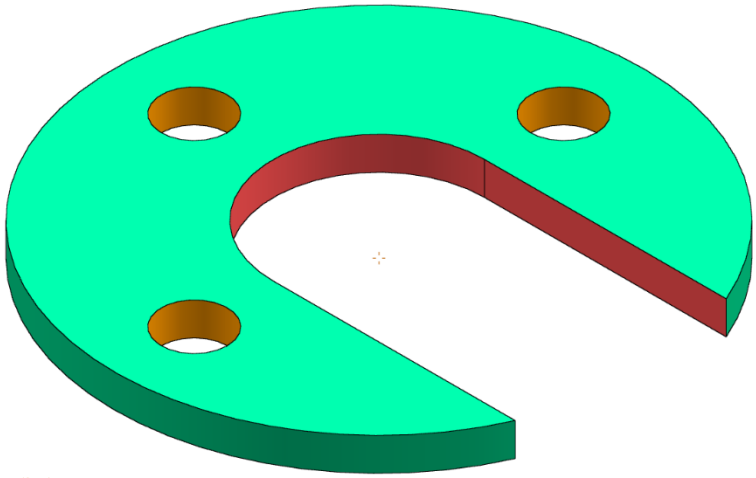
Tips for Best Use:

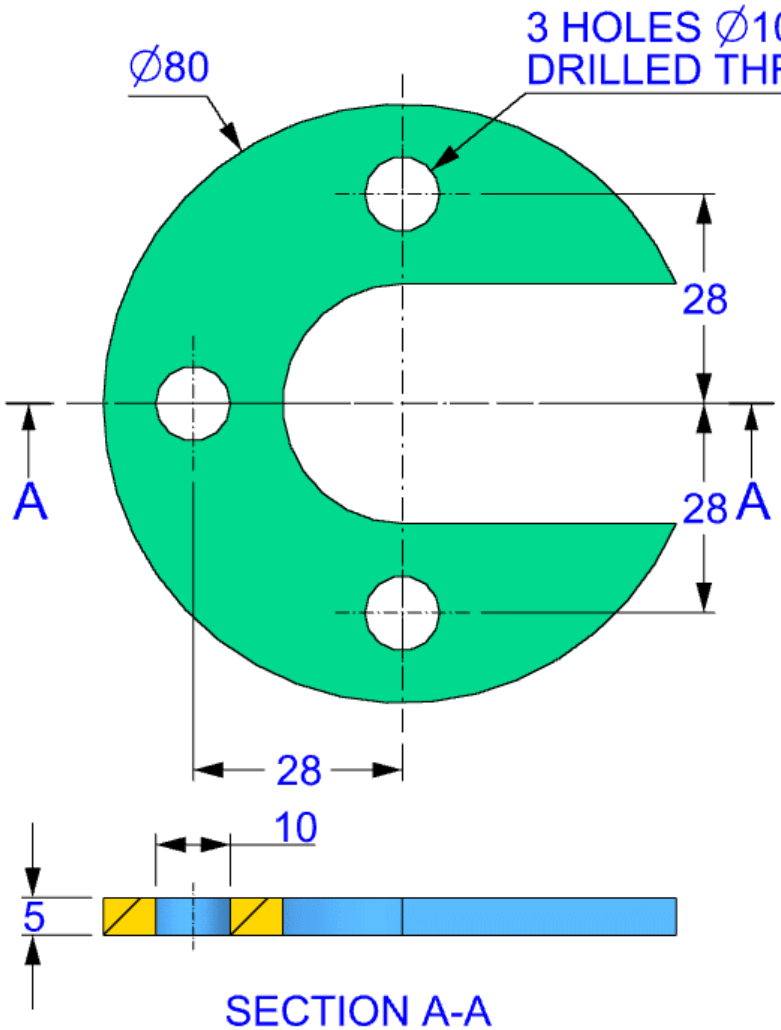
- Complete the exercises in order, or jump to any skill level you prefer.
- All dimensions are in millimeters.
- Where dimensions are missing, apply logic or practice estimation.
- This book is ideal for both students and professionals preparing for industry design work.

Note:
This book is available in multiple formats – **Black & White**, **Standard Color**, and **Premium Color** editions.

Happy learning!
– Team CADIN360

EXERCISE-01





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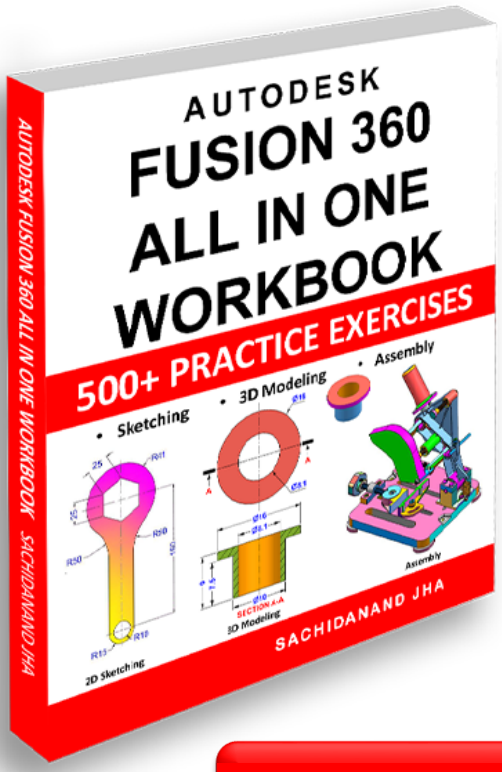

What's Included in the FUSION 360 ALL IN ONE WORKBOOK?

- ✓ Books contains exercises of Sketching, 3D Modeling & Assembly.
- ✓ 500+ Practice Exercises with Dimensions
- ✓ Full Assembly STEP Files (.stp format) – Compatible with all major CAD software
- ✓ Get 200 3D Exercises in .f3d file format
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We're honored to be a part of your journey.
Happy Designing!
– Team **Cadin360**

Master Fusion 360 with Real-World Practice Exercises

This book contains over 500 Fusion 360 practice exercises including sketching, 3D modeling, and assembly drawings. Designed for students, engineers, and professionals to build practical CAD modeling skills.

AUTODESK FUSION 360 ALL IN ONE WORKBOOK

This book contains:-

- 200 2D Sketching Exercises
- 200 3D Modeling Exercises
- Multi-part Assembly Exercises & Detailed Drawings
- All drawings in 3rd Angle projection
- All dimensions are in mm(metric system)