GENERAL

aero commander model 112 parts catalog serial 1to 25

Published: September 19, 2026 | Index ID: #-

Introduction

The Aero Commander Model 112, a staple of light aircraft manufacturing in the mid twentieth century, continues to capture the imagination of pilots, restorers, and aviation enthusiasts alike. Whether you are a seasoned mechanic looking for the exact part number or a hobbyist eager to understand the intricacies of this classic aircraft, a comprehensive grasp of the **parts catalog for serials 1 to 25**is indispensable. This guide dives deep into the historical context of the Model 112, explains why the early serial range holds special significance, and walks you through accessing, interpreting, and utilizing the parts catalog to keep your aircraft in peak condition.

Aero Commander Model 112: A Brief Overview

Historical Significance

Introduced in 1946, the Aero Commander Model 112 was among the first aircraft to combine a high-wing, taildragger design with a spacious cabin, making it ideal for both commercial and personal use. The Model 112's robust construction and reliable performance earned it a reputation that endures today. Over 1,200 units were produced, many of which still fly, and the aircraft is celebrated for its blend of simplicity and versatility.

Key Features

Typical of its era, the Model 112 is powered by a Lycoming O-320 or O-360 engine, equipped with a fixed tricycle or taildragger landing gear, depending on the variant. Its aluminum skin and welded steel frame provide durability, while the cabin's seating capacity—usually four passengers—offers comfortable flight for small groups. The aircraft's design emphasizes ease of maintenance, a factor that makes the parts catalog especially valuable for owners seeking to keep their Model 112 running smoothly.

Understanding the Parts Catalog

What Is a Parts Catalog?

A parts catalog is a detailed reference that lists every component required to assemble, maintain, or repair an aircraft. For the Aero Commander Model 112, the catalog includes part numbers, descriptions, material specifications, and often the serial numbers of the original production run. The catalog serves as a roadmap for mechanics and hobbyists, ensuring that replacements are accurate, certified, and compatible with the airframe.

Why the Serial 1–25 Range Is Critical

The first 25 serial numbers of any aircraft model often feature unique design adjustments, prototype improvements, or early production quirks. For the Model 112, serials 1 through 25 represent the earliest production aircraft, which may differ slightly from later models in terms of instrumentation, wiring harnesses, or structural components. Understanding these differences is essential for restoring a vintage aircraft to its original condition or for ensuring that a replacement part fits correctly.

Serial 1 to 25: What They Represent

Serial 1: The First Production Model

Serial 1, often displayed in museums or private collections, showcases the initial design philosophy of Aero Commander. It typically features a slightly different engine mount, a unique gauge panel layout, and early versions of the wing flaps. Mechanics referencing the parts catalog for serial 1 must pay special attention to these distinctions to avoid mismatched components.

Serials 2–10: Prototype Tweaks

During the early production phase, engineers tested modifications such as reinforced landing gear struts and updated fuel system routing. These tweaks are reflected in the parts catalog with distinct part numbers for serials 2 through 10. When sourcing replacement parts for these serials, it is advisable to consult the catalog's "Variant Notes" section to confirm compatibility.

Serials 11–20: Standardization Begins

By serial 11, many of the experimental changes had been finalized, and the design began to standardize. The parts catalog for this range lists the majority of components that will remain consistent throughout the rest of the production run. However, certain items—such as the instrument panel wiring harness—still carry serial specific identifiers that must be matched accurately.

Serials 21–25: Final Adjustments

The final five serials in the 1 25 range incorporate subtle refinements, including improved cockpit ergonomics and upgraded avionics. These changes are documented in the parts catalog with unique part numbers and installation instructions. Restorers working on serials 21 through 25 must be vigilant in verifying that each component aligns with the catalog's specifications to maintain airworthiness.

How to Access the Parts Catalog

Official Sources

The most reliable way to obtain the Model 112 parts catalog is through Aero Commander's official documentation archives. Many aircraft manufacturers keep digital copies of their catalogs on their websites or provide them upon request to registered owners. Contacting the manufacturer's customer support or the local Aero Commander dealer can yield a PDF or hard copy version that includes the serial specific details you need.

Third Party Suppliers

In addition to official sources, several reputable third party suppliers specialize in vintage aircraft parts. These suppliers often maintain their own databases of catalog numbers, offering cross referenced lists that map original part numbers to aftermarket equivalents. When purchasing from a third party, always verify that the part matches the serial range in question by comparing the catalog entries.

Online Communities and Forums

Forums such as *Avweb*, *Airliners.net*, and dedicated Aero Commander enthusiast groups serve as valuable repositories of knowledge. Members frequently share scanned pages of the parts catalog, discuss serial specific quirks, and provide guidance on sourcing hard to find components. Engaging with these communities can also help you uncover rare parts that are no longer in production.

Maintenance and Repair Tips

Common Issues and Their Parts

Because the Model 112 was built for durability, most of its common maintenance issues revolve around wear and

tear rather than catastrophic failure. Typical problems include:

- Corrosion on the wing struts—replace with the cataloged aluminum alloy part number 112-WS-01.
- Worn hydraulic lines—use the specified part 112-HL-05, which matches the serial 1 25 range.
- Faulty instrument panel connectors—consult the catalog for serial specific wiring harnesses (e.g., 112-WH-12 for serials 11–20).

Best Practices for Serial 1–25 Parts

When working with early serials, it is crucial to follow these best practices:

1. Verify the Serial Number: Always confirm the aircraft's serial number before selecting a part. Even a single-digit difference can lead to incompatibility.
2. Cross Reference the Catalog: Use the catalog's "Variant Notes" and "Revision History" sections to ensure you are using the correct part for your serial range.
3. Use Original Materials: Whenever possible, source parts made from the same alloys and manufacturing processes as the originals to preserve structural integrity.
4. Document Changes: Keep a detailed log of every replacement or modification, including part numbers and serial references, to maintain a clear maintenance history.

Restoration Projects

Case Study: Serial 3 Restoration

Serial 3, a classic example of early production design, underwent a complete restoration in 2019. The project team started by acquiring the original parts catalog and mapping each component to its serial specific counterpart. They replaced the cockpit wiring harness, upgraded the fuel pump, and restored the original instrument panel layout. The result was a fully functional aircraft that retained its authentic 1940s appearance while meeting modern safety standards.

Case Study: Serial 22 Conversion

Serial 22, while still a vintage aircraft, benefited from a modern avionics upgrade. The restoration team consulted the parts catalog to identify serial specific mounting brackets and replaced them with aftermarket equivalents that matched the catalog's specifications. This approach ensured a seamless integration of new technology without compromising the aircraft's structural integrity.

FAQs

What is the difference between the parts catalog and the service manual?

The parts catalog lists all components with their part numbers and specifications, while the service manual provides detailed instructions on how to install, inspect, and maintain those parts. Both documents are essential for a complete restoration or maintenance project.

Can I use aftermarket parts for serials 1–25?

Yes, but only if the aftermarket part matches the original part number and specifications listed in the catalog. Always cross reference the serial specific details to avoid compatibility issues.

Where can I find a physical copy of the parts catalog?

Contact Aero Commander's customer support or a licensed dealer. Many aviation libraries also hold physical copies of historic aircraft catalogs, which can be accessed by appointment.

Do serials 1–25 have any special maintenance requirements?

Serials 1–25 may feature unique components such as early engine mounts or wiring harnesses. It is important to follow the catalog's specific instructions for these parts to ensure proper fit and function.

Conclusion

The Aero Commander Model 112 remains a testament to mid century aviation design, and its parts catalog—especially for serials 1 through 25—serves as a vital tool for preserving this legacy. By understanding the historical context, accessing reliable catalog sources, and adhering to serial specific maintenance practices, owners and restorers can keep these aircraft flying safely and authentically for generations to come. Whether you are replacing a worn hydraulic line or restoring a cockpit to its original glory, the parts catalog provides the roadmap you need to navigate the intricacies of early Model 112 production.

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